Exhibit

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AT&T

Scope of Work

for

WTL Financial

Customer Information (Installation Site):

WTL Financial
9300 Tech Center Drive
Sacramento, CA 95826
Company Billed Telephone Number (BTN): 800-620-7710
Contact Name: Christopher Warren
Contact Phone Number: 800-620-7710

Customer Information (Billing):

9300 Tech Center Drive
Sacramento, CA 95826
Company Billed Telephone Number (BTN): 800-620-7710
Contact Name: Christopher Warren
Contact Phone Number: 800-620-7710

Project General Information:

Description/System Type: 1000M Cabinet
Cut Date: February 1, 2007

Sales Channel Name: Woodrow Lucas
Sales Channel Phone: 916-972-6490
Sales Channel #2 Name:
Sales Channel #2 Phone:
PMI Number: 265006

1000M Cabinet

General Description of Project

This Statement of Work between AT&T DataComm and WTL Financial provides information and terms and conditions regarding the implementation for the equipment contained in this proposal.

Install new CS1000M with the following:
12 16-Port Digital Station Card (192 Digital Ports)
01 16-Port Analog Station Card (16 Analog Ports)
01 8-Port Universal Trunk Card (8 Ports
10 TMDI PRI/DTI Cards
16 Analog Station ISMs
184 Digital Station ISMs.
08 IP ISMs
180 Headsets with Amplifiers

Two Hour UPS

· OTM Station Administration and Enhanced Billing for up to 200 Users

CallPilot, 8 Ports 350 hours storage equipped for 120 Users.

EXHIBIT

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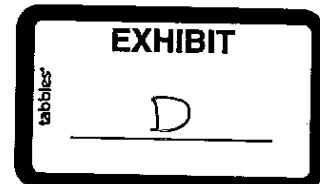
AT&T Responsibilities

AT&T will coordinate ordering, shipping, and delivery of equipment and materials to the installation site.

AT&T will provide a Project Manager (PM) to manage the implementation of the proposed system. The PM will serve as the single point of responsibility for the following AT&T project related issues:

AT&T/contractor resource utilization/scheduling
Customer relationship issues,
Equipment and material issues
Training coordination
Change orders
Project-related correspondence
Project acceptance documents
Project handoff documents to maintenance.

The PM will hold an initial meeting with the customer to review this scope of work. Pricing has been provided based on this Scope of Work as a complete package. Any changes to the project scope may result in additional cost.

The PM will provide a project plan as agreed upon with the customer.

The PM will meet periodically with the customer representative for project status.

AT&T will complete database collection, programming, and documentation of the proposed system configuration as agreed upon with the customer. AT&T reviews/compiles customer-provided data.

This pricing is based on the current Nortel Networks engineering rules and practices. Should Nortel change or revise these practices, this price may no longer be valid and may require re-engineering at which time may or may not cause the customer price to change.

AT&T will review billing with customer.

AT&T will provide proposed system database and cable record documentation to customer.

AT&T will review proposed system warranty and repair procedure with customer.

AT&T DataComm will have satisfied its obligations to the customer under this Statement of Work when the tasks listed under AT&T DataComm Responsibilities and Installation and Testing are completed.

System Configuration Summary

Software Summary
The proposed solution has been configured with the following software package and options.
  Current Software Information
  Select one software is provisioned in the existing system.
  The existing equipment software release is
    is the current number of TN's provisioned on the system.
    is the current number of ACD Agent TN's provisioned on the system.
    is the current number of AST TN's provisioned on the system.
    is the current number of RAN Broadcast TN's provisioned on the sytem.

is the current number of Music Broadcast TN's provisioned on the system.
is the current number of Internet Phone ISM's provisioned on the system.

This proposal is for an upgrade/addition to the software of an existing switch but will not change the release level of the existing software. To obtain advanced and current features an upgrade to the current software release would be required.

Select one is the proposed software feature level.
is the proposed software release.
is the proposed number of TN's provisioned on the system.
is the proposed number of ACD Agent TN's provisioned on the system.
is the proposed number of AST TN's provisioned on the system.
is the proposed number of RAN Broadcast TN's provisioned on the sytem.
is the proposed number of Music Broadcast TN's provisioned on the system.
is the proposed number of Internet Phone ISM's provisioned on the system.

New Systems or Upgrade from earlier software release.

This proposal is for an upgrade from release software to Communication Server Release 4.5 . Communication Server Release 4.5 software utilizes Nortel Networks Incremental Software Management (ISM) plan.

The Equipment and software configuration was based upon the Order Pro OPI file named OPI Filename here

An OPI file is a snapshot of the existing PBX software and hardware configuration. Changes to that configuration after the Order Pro File was captured can impact the configuration of this upgrade.

The information used to create the Order Pro OPI file was extracted on or before Extract the date from the OPI filename and place it here..

This proposal is for a new system and utilizes Communication Server Release 4.5 software. Communication Server Release 4.5 software utilizes Nortel Networks Incremental Software Management (ISM) plan.

L3A - Advanced Call Center Services is the software service level that has been proposed for this project.

The ISM system utilized by Communication Server Release 4.5   licenses software to user types. A digital station user is required to have a digital station ISM. Below is the list of ISM's for the proposed solution.

The equipped ISM's are assigned to be used by a station at the time of cutover. The spare ISM's have been included for growth but does not mean hardware has been included for this growth.

In cases where the equipped ISM's are equal to the spare ISM's, either no growth estimates were supplied to AT&T, or the growth has been included in the equipped number by the customer.

Optional Software Features

The DISA option has not been included for this proposal.
DISA stands for "Direct Inward System Access" and allows users to dial into the PBX and access features or services that could be used to place outbound calls. For security reasons the feature is only included at the request of the customer.
The BARS option has been included for this project.
BARS stands for" Basic Automatic Route Selection" and is used to provide outbound call to be routed through the proper trunk facilities.
PLEASE USE THE SYNCH WITH MERPMI BUTTON
PLEASE USE THE SYNCH WITH MERPMI BUTTON

ISM Parameters

16 total Analog Station Licenses have been provisioned, of which 16 are equipped and 0 are spare.

184 total Digital Station Licenses have been provisioned, of which 184 are equipped and 0 are spare.

180 total ACD Agent Licenses have been provisioned, of which 180 are equipped and 0 are spare.

20 total RAN Broadcast Licenses have been provisioned, of which 20 are equipped and 0 are spare.

0 total AST Licenses have been provisioned, of which 0 are equipped and 0 are spare.

0 total CLASS User Licenses have been provisioned, of which 0 are equipped and 0 are spare.

0 Total Basic IP User ISM (provisioned in increments of 8), of which 0 are equipped and 0 are spare.

0 total IP User Licenses's have been provisioned, of which 0 are equipped and 0 are spare.

0 total ITG ISDN Trunk Licenses have been provisioned, of which 0 are equipped and 0 are spare.

0 total IP Peer H.323 Trunk Licenses have been provisioned, of which 0 are equipped and 0 are spare.

0 total SIP Access Port Licenses have been provisioned, of which 0 are equipped and 0 are spare.

20 total Music Broadcast Licenses have been provisioned, of which 20 are equipped and 0 are spare.

0 total Personal Call Assistant Licenses have been provisioned, of which 0 are equipped and 0 are spare.

0 total Geographic Redundant Standby site Licenses have been provisioned, of which 0 are equipped and 0 are spare.

0 total Standby IP Users Licenses have been provisioned, of which 0 are equipped and 0 are spare.

0 total Survivabilty Licenses have been provisioned, of which 0 are equipped and 0 are spare.

Upgrades
Existing Software Information
 This proposal includes an upgrade to the existing No software.
 The existing software service level is Select One
 The DISA option is not provisioned in the existing software.
 The BARS option is not provisioned in the existing software.
 PLEASE USE THE SYNCH WITH MERPMI BUTTON

Proposed Software Information
 This proposal will upgrade the existing No software to No.
 The new software service level is Select One
 The DISA option has not been added to the existing software.
 DISA stands for "Direct Inward System Access" and allows users to dial into the PBX and access features or services that could be used to place outbound calls. For security reasons the feature is only included at the request of the customer.
 The BARS option has not been added to the existing software.
 BARS stands for" Basic Automatic Route Selection" and is used to provide outbound call to be routed through the proper trunk facilities.
 PLEASE USE THE SYNCH WITH MERPMI BUTTON
 PLEASE USE THE SYNCH WITH MERPMI BUTTON

ISM Parameters
 0 Analog Station User Licenses are provisioned on the existing system. AT&T proposes to add 0 for a total of 0
 0 Digital Station User Licenses are provisioned on the existing system. AT&T proposes to add 0 for a total of 0
 0 ACD Agent Licenses are provisioned on the existing system. AT&T proposes to add 0 for a total of 0
 0 RAN Broadcast Licenses are provisioned on the existing system. AT&T proposes to add 0 for a total of 0
 0 AST Licenses are provisioned on the existing system. AT&T proposes to add 0 for a total of 0
 0 CLASS User Licenses are provisioned on the existing system. AT&T proposes to add 0 for a total of 0
 0 IP User Licenses are provisioned on the existing system. AT&T proposes to add 0 for a total of 0
 0 ITG ISDN Trunk Licenses are provisioned on the existing system. AT&T proposes to add 0 for a total of 0
 0 IP Peer H.323 Trunk Licenses are provisioned on the existing system. AT&T proposes to add 0 for a total of 0

0 SIP Access Port Licenses are provisioned on the existing system. AT&T proposes to add 0 for a total of 0

0 Music Broadcast Licenses are provisioned on the existing system. AT&T proposes to add 0 for a total of 0

0 Personal Call Assistant Licenses are provisioned on the existing system. AT&T proposes to add 0 for a total of 0

0 total Geographic Redundant Standby site Licenses are provisioned on the existing system. AT&T proposes to add 0 for a total of 0

0 Standby IP Users Licenses are provisioned on the existing system. AT&T proposes to add 0 for a total of 0

0 Survivability Licenses are provisioned on the existing system. AT&T proposes to add 0 for a total of 0

Additional Software Data:

Trunk Data
  14 Local (DID, CO) Analog Trunks
  0 FX/TIE Trunks
  0 RAN Trunks
  0 Paging Trunks
  10 DTI/PRI Circuits
  AT&T expects all T1/PRI network demarcs to be co-located with the proposed equipment.
  Additional Trunk Data:

Station Data
Digital Set Information
180 Digital Station Lines
0 Select 3901 single line sets, with 5 programable keys, have been provisioned.
180 Charcoal 3902 single line sets with 2 line x24 character display, 3 programable & 6 fixed keys, and speakerphone have been provisioned.
0 Select 3903 4 line sets, with a 3 line x 24 character display, up to 4 programable & 10 fixed keys, and speakerphone have been provisioned.
0 Select 3904 12 line sets with a 5 line x 24 character display, up to 12 programable & 10 fixed keys, and speakerphone, have been provisioned.
0 Select 3905 Call Center set, up to 8 lines, with a 4 line x 24 character display, up to 8 programable & 6 fixed keys, have been provisioned.
0 Select 2006 - 6 key, single line sets have been provisioned.
0 Select 2008 - 8 key set without display sets have been provisioned.
0 Select 2008 - 8 key set with display sets have been provisioned.
0 Select 2008 - 8 key speakerphone without display sets have been provisioned.
0 Select 2008 - 8 key speakerphone with display sets have been provisioned.
0 Select 2616 - 16 key speakerphone without display sets have been provisioned.
0 Select 2616 - 16 key speakerphone with display sets have been provisioned.

0 Select 2216 - Call Center set, 16 key speakerphone with display sets have been provisioned.

Single Line Analog Sets
0 Single Line/Analog Sets
0 Single Line/Analog Non-set Ports
Customer Supplied Sets
0 Customer Supplied Digital Sets
16 Customer Supplied Analog Sets
IP Set Information
0 IP Sets have been included
0 Select Model 2001 IP sets have been provisioned.
0 Select Model 2002 IP sets have been provisioned.
0 Select Model 2004 IP sets have been provisioned.
0 IP Softphone(s)
0 Model 2050 IP Softphone Clients have been provisioned.
Miscellaneous
0 ISDN BRI Lines
0 Centrex Lines
0 Attendant Consoles
0 PC Attendant Consoles
0 Centrex IP Lines
0 Centrex IP Sets

0 Centrex IP SoftPhones.
0 Layer 2 Switch(es) dedicated for use with IP Phones have been included.

Local power for the IP phones have been quoted. This means that a transformer requiring one AC outlet will
be placed within 6 cable feet of the telephone instrument. During an AC power outage the phones using this
transformer will not function unless a UPS power is available at the instrument location.

Additional Station Data

For analog telephone set color(s) please refer to the parts description located on the equipment list.

ITG Card Configuration
0 ITG Line Cards
0 ITG Trunk Cards

0 ITG Line Cards to be installed
The ITG Line Card provides support for IP phones and communication gateway ports between the IP network and
the TDM backplane of the switch. The ports are for communication between the IP phones and the TDM
backplane only. It is not used for IP trunks.

The ITG Line Card requires a 10BaseT ELAN (management LAN) connection. Also, a 10BaseT or 100BaseT TLAN
(transport LAN) connection is required to a QoS enabled, voice over IP capable network.

ITG Line Card requires the following:
   Either 1 card slot for the 32 port card or 1 card slot for the 8 port card, or 2 card slots for the 24
port card.
ITG 3.0, 3.1, and 4.0 are software versions for the cards.

32 port card supports the registration of 128 IP devices. The 8 port card supports the registration of 32
IP devices. The 24 port card supports the registration of up to 96 IP devices.

OTM 2.2 or later is required for ITG Line 4.0 cards.
OTM 2.1 or later is required for ITG Line 3.1.
OTM 2.0 or later is required for ITG Line 3.0.
ITG Line 3.1.
A modem router is required for remote support. Unless otherwise stated, this modem router is not included
in this proposal. A RM356 modem router or equivalent is required for remote support. Unless otherwise
stated, this modem router is not included in this proposal.
CS 1000 Release 4.0 is required for IP Line 4.0.
CS 1000 Release 3.0 is required for IP Line 3.1. X11 Release 25.30, 25.40, 25.40B, or Succession 2.0 is
required for ITG Line 3.0.
Note: IP Line 3.1 and 3.0 are not supported on a system at CS 1000.
Release 4.0.
. Also, IP Line 3.0 is not supported on a system at CS 1000 Release 3.0.IP Line 3.0 on a X11 Release 25.30,
25.40, & 25.40B releases does not support corporate directory, user defined feature key labels, and private
zones.
IP Line 3.0 on X11 Release 25.30 does not support IP 2002 sets. IP 2002 sets are supported on 25.40 &
25.40B with IP Line 3.0.
IP Line 3.0 on a X11 Release 25.30, 25.40, & 25.40B releases does not support IP.

IP Line 3.0 on a X11 Release 25.30, 25.40, & 25.40B releases does not support IP 2002 phones, corporate
directory, user defined feature key labels, and private zones 2002 phones, corporate directory, user
defined feature key labels, and private zones. IP licenses for each IP phone are required on the switch.

IP Line Cards are not supported on TDM remotes i.e. Carrier, Mini-Carrier, Fiber, and Fiber Multi-IPE
Remotes.

Cabinet systems require the newer cabinet front covers. These were introduced with the NTAK11xD cabinets
in July 1999. If the cabinet is a NTAK11xC (or earlier) or an NTDK50, the NTDK18AA Cabinet Upgrade Kit,
unless already install should be ordered. The newer cabinet front cover has a rounded shape where the old
covers were flat.

IPE modules with the NT8D81BA backplane to I/O panel ribbon cable assembly and a non-removable molded
figure connector can only connect to a 10BaseT TLAN.

A non-removable molded figure connector can only connect to a 10BaseT TLAN. These IPE modules were
manufactured in 1998 & 1999. To support a 100BaseT TLAN, replace the NT8D81BA with the NT8D81AA cable
assembly.

0 ITG Trunk Cards to be installed

The ITG Trunk Card provides voice over IP access between systems i.e. usually called voice over IP trunking gateway. The card takes voice from the TDM side of the switch and converts it into IP packets to be sent to another ITG card, a MCM, or an H.323 gateway.

Unless stated otherwise, the customer is responsible to ensure the devices the ITG Trunk application is communicating with are compatible.

The ITG Trunk Card requires a 10BaseT ELAN (management LAN) connection. Also, a 10BaseT or 100BaseT TLAN (transport LAN) connection is required to a QoS enabled, voice over IP capable network.

ITG Trunk Card requires the following:
   Either 1 card slot for the 32 port card or 2 card slots for the 24 port card.

ITG Trunk 2.1 and 3.0 are software versions for the cards physical D-channel off a NT6D80 MSDL card or a NTAK02BB SDI/DCH card. Note: no more than 382 trunks can be supported on a single D-channel.

OTM 2.1 or later is required for ITG Trunk 3.0 cards.
OTM 1.1 or later is required for ITG Trunk 2.1.
A modem router is required for remote support. Unless otherwise stated, this modem router is not included in this proposal.
ITG Trunk 2.1 requires Release 25.10 or later.
ITG Trunk 3.0 requires Release 25.40 or later.

A RM356 modem router or equivalent is required for remote support. Unless otherwise stated, this modem router is not included in this proposal. X11 Release 25 or later is required for ITG Trunk.

ISDN MCDN or QSIG networking features are required. ITG Trunk Licenses are required on a switch. CS 1000 Release 3.0 or later Cabinet systems require the newer cabinet front covers. These were introduced with the NTAK11xD cabinets in July 1999. If the cabinet is a NTAK11xC (or earlier) or an NTDK50, the NTDK18AA Cabinet Upgrade Kit should be ordered. Unless covers were flat Cabinet systems require the newer cabinet front covers.

IPE modules with the NT8D81BA backplane to I/O panel ribbon cable assembly and a non-removable molded figure connector can only connect to a 10BaseT TLAN. These IPE modules were manufactured in 1998 & 1999. To support a 100BaseT TLAN, replace the NT8D81BA with the NT8D81AA cable assembly.

Signaling Server Configuration

The firmware on 0 Signaling Servers will be upgraded to the correct release for the proposed system.

0 Primary Signaling Servers
1 Redundant Primary Signaling Servers
0 Terminal Proxy Servers
0 Redundant Terminal Proxy Servers
0 H.323 Gateway Servers
0 Redundant H.323 Gateway Servers
0 Network Routing Service (NRS) Servers
0 Alternate Network Routing Service (NRS) Servers
0 SIP Gateways
0 Redundant SIP Gateways
Call Server
0 Succession 1000 Call Servers
Branch Office Server
0 Succession Branch Office Servers
Media Services Cards
0 Succesion 8 Port Media Services Cards
1 Succession 32 Port Media Services Cards
0 ITG Cards will be converted to Succession Media Services Cards
Media Gateway
0 Media Gateways
0 Media Gateway Expansions
0 Survivable Media Gateways
0 Dedicated Existing Cat. 5 Cables
ConsultingServices including network assessments are not include with this scope of work.

Voice over IP Scope of work Section

A detailed scope of work for the MCS 5100 is included as an addendum to this scope of work. It contains information on LAN readiness and 911 issues. It also includes a LAN Waiver, Consulting Services Acknowledgment and a 911 form that must be signed by the customer.

This Scope of Work ("ScOW") between AT&T DataComm (also referred to in this ScOW as "AT&T") and WTL Financial provides detailed information and considerations that must be taken into account for successful implementation of IP Telephony and Voice over IP in WTL Financial's network.

The installation of this Nortel Voice over IP Telephony System is described herein by generally stating the responsibilities of both AT&T and WTL Financial. AT&T will, with WTL Financial's approval, perform a variety of Services including network consultation, system design, enhanced staging, Implementation Management, on-site engineering and user training for the installation of this Voice over IP system.

Depending on the scope of the engagement, AT&T may also provide Project Management, element monitoring and maintenance services for this Voice over IP system.

The purpose of this ScOW is to describe the goals and responsibilities of each party for the overall implementation process and successful deployment of Communications Server 1000 in WTL Financial's network environment.

Customer, by signing below, indicates that the Scope of Work has been read and the terms outlined within have been accepted. This document includes the following specific Acknowledgement forms that require Customer endorsement prior to deployment of your IP Telephony solution.

- Customer Network Acknowledgement
- Consulting Services Acknowledgement
- 911 Emergency Service Acknowledgement

General System Information

CS1000 B
The Nortel Networks Media Gateway 1000B is made up of 1 Media Gateway 1000B and 1 or more signaling servers.

Definitions:
ELAN – An ELAN is a dedicated subnet that is in its own broadcast domain. The ELAN stands for the Embedded LAN.

This is a requirement for Nortel Networks voice over IP. The ELAN handles communication between the call server, media gateways, signaling servers, media cards, applications, and other components. The following are notes concerning ELAN's:

As noted above, the ELAN must be on its own broadcast domain.

The ELAN used for the Media Gateway 1000B and signaling servers must be a 10BaseT Full Duplex or higher.

TLAN – A TLAN is the part of the data network used for telephony voice and telephony signaling traffic. The TLAN must be a 100BaseT Full Duplex LAN.

Components:
The signaling server is rack mounted and provides a number of functions including (and not limited to) terminal proxy service, H.323 & SIP Gateway, Network Routing Service, etc. Each signaling server requires an ELAN connection and TLAN connection.

The ELAN connection is 10BaseT Full Duplex. The TLAN connection is 100BaseT Full Duplex.

Voice Gateway Media Cards are TDM to IP conversion (or gateway) cards. These cards allow for the conversion from IP to TDM devices and back. Each Media Card requires an ELAN connection and a TLAN connection. These cards are placed in Media Gateway 1000B to provide communication to conference ports, digital station ports, analog station ports, application ports, digital trunks, analog trunks, etc.

The Media Gateway 1000B is used to provide IP phones local access to digital trunking, analog trunking, analog stations, conferencing, and other TDM connections.
The Media Gateway 1000B is 19" rack mounted.
The Media Gateway 1000B has 4 card slots. An expansion chassis can be added for 4 more card slots.
The Media Gateway 1000B is a branch device that communicates to a host Communication Server 1000 type system.

The IP devices physically at the Media Gateway 1000B are actually registered to the host system as if they were physically located with the host.

In the event the voice over IP path to the host system is inaccessible, the IP phones will reregister with the Meridian Gateway 1000B signaling server until the path is available. TDM devices (such as digital sets, analog sets, digital trunks, etc.) are not "part" of the host system.

Communication between the host system and the Media Gateway 1000B TDM ports/devices requires H.323 or SIP Access Port licenses. Likewise, under normal circumstances when the IP phones are registered to the host system, communication between the IP sets and the TDM ports/devices off the Media Gateway 1000B requires H.323 or SIP Access Port licenses since logically the IP devices are off the host system.

Media Gateway 1000B's are typically distributed over wide area networks (WAN's). WAN's need to be properly engineered to support voice over IP as well as any data networking requirements. The WAN's must have QoS implemented to ensure proper prioritization of voice over IP traffic.

CS1000 M
The Nortel Networks Communication Server 1000M is made up of the following:
1 or more signaling servers and a single processor main chassis with expansion chassis or cabinets as necessary
1 or more signaling servers and a single processor main cabinet with expansion cabinets or chassis as necessary
1 or more signaling servers and a single processor half group modular system
2 or more signaling servers and a dual processor single group modular system
2 or more signaling servers and a dual processor multi-group modular system

Definitions:
ELAN – An ELAN is a dedicated subnet that is in its own broadcast domain. The ELAN stands for the Embedded LAN.
This is a requirement for Nortel Networks voice over IP. The ELAN handles communication between the call processors,
signaling servers, media cards, applications, and other components. The following are notes concerning ELAN's:
   As noted above, the ELAN must be on its own broadcast domain.
   The ELAN used for the CS 1000M and signaling servers must be a 10BaseT Full Duplex or higher.

TLAN – A TLAN is the part of the data network used for telephony voice and telephony signaling traffic.
The TLAN must be a 100BaseT Full Duplex LAN.

Components:
The signaling server is rack mounted and provides a number of functions including (and not limited to) terminal proxy service, H.232 & SIP Gateway, Network Routing Service, etc. Each signaling server requires an ELAN connection and TLAN connection.

The ELAN connection is 10BaseT Full Duplex. The TLAN connection is 100BaseT Full Duplex.

Voice Gateway Media Cards are TDM to IP conversion (or gateway) cards. These cards allow for the conversion from IP to TDM devices and back. Each Media Card requires an ELAN connection and a TLAN connection. These cards are placed in IPE card slots of the system to provide communication to conference ports, digital station ports, analog station ports, application ports, digital trunks, analog trunks, etc.

1000M Chassis
The main chassis of the CS 1000M contains the call processor of the system as well as TDM ports/devices such as digital station ports, analog station ports, digital trunks, analog trunks, conferencing, etc. The main chassis has 4 IPE card slots.

An expander chassis can be added to provide 4 IPE additional card slots. One of the card slots will include a 48 port digital line card.
The main chassis and expander chassis can be wall, rack, or table mounted.

The expansion chassis, cabinets can be added to the CS 1000M to provide additional IPE card slots. Each expansion chassis includes 4 card slots and can have a corresponding expander chassis to 4 additional card slots. One of the card slots in the chassis is used for the 48 port digital line card. The expansion cabinets have 10 card slots each. Up to 4 expansion chassis, cabinets, or some combination thereof can be added to the main CS 1000M system.

1000M Cabinet

The main cabinet of the CS 1000M contains the call processor of the system as well as TDM ports/devices such as digital station ports, analog station ports, digital trunks, analog trunks, conferencing, etc. The main cabinet has 10 IPE card slots.

The main cabinet must be wall mounted.

The expansion chassis, cabinets can be added to the CS 1000M to provide additional IPE card slots. Each expansion chassis includes 4 card slots and can have a corresponding expander chassis to 4 additional card slots. One of the card slots in the chassis is used for the 48 port digital line card. The expansion cabinets have 10 card slots each. Up to 4 expansion chassis, cabinets, or some combination thereof can be added to the main CS 1000M system.

1000M Half Group

The single processor CS 1000M Half Group is a modular design. Modules are stacked in floor mounted columns (no more than 4 high).
The CS 1000M Half Group has 1 core/network module that contains the processor and TDM network switching components.
IPE modules are connected to the core/network module and provide 16 IPE card slots in each IPE for TDM cards or Media Cards.
Actual number of IPE modules that can be connected to the CS 1000M Half Group is based on traffic engineering of the network switching backplane.

1000M Single Group

The dual processor CS 1000M Single Group is a modular design. Modules are stacked in floor mounted columns (no more than 4 high).
The CS 1000M Single Group has 2 core/network modules that contain the processors and TDM network switching components.
IPE modules are connected to the core/network module and provide 16 IPE card slots in each IPE for TDM cards or Media Cards.
Actual number of IPE modules that can be connected to the CS 1000M Single Group is based on traffic engineering of the network switching backplane.

1000M Multi-Group

The dual processor CS 1000M Multi Group is a modular design. Modules are stacked in floor mounted columns (no more than 4 high).
The CS 1000M Multi Group has 2 core/network modules that contain the processors and TDM network switching components.
Along with this, additional network modules can be added that increase the number switching resources in the system.
IPE modules are connected to the core/network module and provide 16 IPE card slots in each IPE for TDM cards or Media Cards.
Actual number of IPE modules that can be connected to the CS 1000M Multi Group is based on traffic engineering of the network switching backplane.

CS1000 S

The Nortel Networks Communication Server 1000S (CS 1000S) is made up of 1 call server, Media Gateway 1000S's, and 1 or more signaling servers.

Definitions:
ELAN - An ELAN is a dedicated subnet that is in its own broadcast domain. The ELAN stands for the Embedded LAN.
This is a requirement for Nortel Networks voice over IP. The ELAN handles communication between the call server, media gateways, signaling servers, media cards, applications, and other components. The following are notes concerning ELAN's:

   As noted above, the ELAN must be on its own broadcast domain.

The ELAN used for the CS 1000S call server, signaling servers, and Media Gateway 1000S's must be a 10BaseT Full Duplex or higher.

TLAN - A TLAN is the part of the data network used for telephony voice and telephony signaling traffic. The TLAN must be a 100BaseT Full Duplex LAN.

Components:
The call server is rack mounted. It requires an ELAN connection.

The signaling server is rack mounted and provides a number of functions including (and not limited to) terminal proxy service, H.232 & SIP Gateway, Network Routing Service, etc. Each signaling server requires an ELAN connection and TLAN connection.

The ELAN connection is 10BaseT Full Duplex. The TLAN connection is 100BaseT Full Duplex.

Voice Gateway Media Cards are TDM to IP conversion (or gateway) cards. These cards allow for the conversion from IP to TDM devices and back. Each Media Card requires an ELAN connection and a TLAN connection. These cards are placed in Media Gateway 1000S's to provide communication to conference ports, digital station ports, analog station ports, application ports, digital trunks, analog trunks, etc.

The Media Gateway 1000S's are media gateways used for digital devices, analog devices, digital trunking, conferencing, analog trunking, and other TDM connections.
The Media Gateway 1000S's are 19" rack mounted.

Each Media Gateway 1000S has 4 card slots. An expansion chassis can be added for 4 more card slots.

The CS 1000S can support up to 4 Media Gateway 1000S's. The Media Gateway 1000S's are under direct control of the CS 1000S call server. The Media Gateway 1000S's can connect to the call server directly using a crossover Ethernet cable or thru a 100BaseT Full Duplex Layer 2 Ethernet switched backbone. This connection is sometimes referred to as the SLAN.

Under some circumstances, Media Gateway 1000S's can be distributed around a LAN. Here are some of the guidelines:
  The distributed Media Gateway 1000S should be connected to a layer 2 Ethernet switch or directly to a layer 3 switch.
  The call server and distributed Media Gateway 1000E Media Card ELAN network interfaces must be in the same ELAN subnet. The Media Gateway 1000E SSC network interfaces must also be in the same ELAN subnet. Virtual LAN's can be subnet.
  The Media Gateway 1000E SSC network interfaces must also be in the same ELAN subnet. Virtual LAN's can be used to accomplish this.
  If the ELAN subnet is configured as a routable subnet (connected to the rest of the IP network) a packet filtering gateway router, or firewall, must be configured to prevent broadcast, multicast, and unauthorized traffic from entering the ELAN subnet.

  The use of a broadcast and multicast rate limiting is recommended on the ELAN and TLAN subnets.

  The distributed Media Gateway 1000S Media Card TLAN network interfaces may be in a different TLAN subnet provided the distributed Media Gateway 1000S Media Cards are configured in their own node.

.CS1000 E

The Nortel Networks Communication Server 1000E (CS 1000E) is made up of 2 call servers, Media Gateway 1000E's, Media Gateway 1000T's, 2 or more signaling servers, and a terminal server.

Definitions:
ELAN - An ELAN is a dedicated subnet that is in its own broadcast domain. The ELAN stands for the Embedded LAN. This is a requirement for Nortel Networks voice over IP. The ELAN handles communication between the call servers, media gateways, signaling servers, media cards, applications, and other components. The following are notes concerning ELAN's:

  As noted above, the ELAN must be on its own broadcast domain.
. The ELAN used for the CS 1000E call servers, signaling servers, and Media Gateway 1000E's must be a 100BaseT Full Duplex or higher.

The ELAN used for the CS 1000S call server, signaling servers, and Media Gateway 1000S's must be a
10BaseT Full Duplex or higher.

TLAN -- A TLAN is the part of the data network used for telephony voice and telephony signaling traffic.
The TLAN must be a 100BaseT Full Duplex LAN.

Components:
The call server is rack mounted. It requires an ELAN connection.

The signaling server is rack mounted and provides a number of functions including (and not limited to)
terminal proxy service, H.232 & SIP Gateway, Network Routing Service, etc. Each signaling server requires
an ELAN connection and TLAN connection.

The ELAN connection is 10BaseT Full Duplex. The TLAN connection is 100BaseT Full Duplex.

Voice Gateway Media Cards are TDM to IP conversion (or gateway) cards. These cards allow for the
conversion from IP to TDM devices and back. Each Media Card requires an ELAN connection and a TLAN
connection. These cards are placed in Media Gateway 1000S's to provide communication to conference ports,
digital station ports, analog station ports, application ports, digital trunks, analog trunks, etc.

The Media Gateway 1000S s are media gateways used for digital devices, analog devices, digital trunking,
conferencing, analog trunking, and other TDM connections.
The Media Gateway 1000S's are 19" rack mounted.

Each Media Gateway 1000S has 4 card slots. An expansion chassis can be added for 4 more card slots.

The CS 1000S can support up to 4 Media Gateway 1000S's. The Media Gateway 1000S's are under direct control
of the CS 1000S call server. The Media Gateway 1000S's can connect to the call server directly using a
crossover Ethernet cable or thru a 100BaseT Full Duplex Layer 2 Ethernet switched backbone. This
connection is sometimes referred to as the SLAN.

Under some circumstances, Media Gateway 1000S's can be distributed around a LAN. Here are some of the
guidelines:
  The distributed Media Gateway 1000S should be connected to a layer 2 Ethernet switch or directly to a
  layer 3 switch.
  The call server and distributed Media Gateway 1000E Media Card ELAN network interfaces must be in the
  same ELAN subnet. The Media Gateway 1000E SSC network interfaces must also be in the same ELAN subnet.
  Virtual LAN's can be subnet.
  The Media Gateway 1000E SSC network interfaces must also be in the same ELAN subnet. Virtual LAN's can be
  used to accomplish this.
  If the ELAN subnet is configured as a routable subnet (connected to the rest of the IP network) a packet
  filtering gateway router, or firewall, must be configured to prevent broadcast, multicast, and
  unauthorized traffic from entering the ELAN subnet.

  The use of a broadcast and multicast rate limiting is recommended on the ELAN and TLAN subnets.

  The distributed Media Gateway 1000S Media Card TLAN network interfaces may be in a different TLAN subnet
  provided the distributed Media Gateway 1000S Media Cards are configured in their own node.

CS1000 E

The Nortel Networks Communication Server 1000E (CS 1000E) is made up of 2 call servers, Media Gateway
1000E's, Media Gateway 1000T's, 2 or more signaling servers, and a terminal server.

Definitions: .
ELAN -- An ELAN is a dedicated subnet that is in its own broadcast domain. The ELAN stands for the Embedded
LAN. This is a requirement for Nortel Networks voice over IP. The ELAN handles communication between the
call servers, media gateways, signaling servers, media cards, applications, and other components. The
following are notes concerning ELAN's:

  As noted above, the ELAN must be on its own broadcast domain.
. The ELAN used for the CS 1000E call servers, signaling servers, and Media Gateway 1000E's must be a
  100BaseT Full Duplex or higher.

TLAN - A TLAN is the part of the data network used for telephony voice and telephony signaling traffic.
The TLAN must be a 100BaseT Full Duplex LAN.

Components:

The 2 call servers are rack mounted. They synchronize using a dedicated point to point crossover CAT 5
cable between them (unless Campus Redundancy is setup). They each require an ELAN connection. The COM 1
port of each call server will connect to the terminal server.

The terminal server is a rack mounted device used to provide serial port connections for applications of
the CS 1000E.

Each Call Server COM 1 port is connected to this server. The server requires a connection to the data
network.

The signaling servers are rack mounted and provide a number of functions including (and not limited to)
terminal proxy service, H.232 & SIP Gateway, Network Routing Service, etc. Each signaling server requires
an ELAN connection and TLAN connection.

The ELAN connection is 10BaseT Full Duplex. The TLAN connection is 100BaseT Full Duplex.

Voice Gateway Media Cards are TDM to IP conversion (or gateway) cards. These cards allow for the
conversion from IP to TDM devices and back. Each Media Card requires an ELAN connection and a TLAN
connection. These cards are placed in Media Gateway 1000E's to provide communication to conference ports,
digital station ports, analog station ports, application ports, etc. They are placed in Media Gateway
1000T's to provide access to digital and analog trunk ports.

The Media Gateway 1000E's are media gateways used for digital devices, analog devices, analog trunking,
conferencing, and other TDM connections except digital trunking. The Media Gateway 1000E's are 19" rack
mounted.

Each Media Gateway 1000E has 4 card slots. An expansion chassis can be added for 4 more card slots.

The CS 1000E can support up to 30 Media Gateway 1000E's. The Media Gateway 1000E's are under direct
control of the CS 1000E call servers. Each Media Gateway 1000E can support 2 ELAN connections. At least
one is required.

The ELAN connections must be 100BaseT Full Duplex and connect through a layer 2 switch to the call servers.
The use of the second ELAN connection would allow for the Media Gateway 1000E to be dual-homed thus
providing redundancy.

Under some circumstances, Media Gateway 1000E's can be distributed around a LAN. Here are some of the
guidelines:
  The distributed Media Gateway 1000E should be connected to a layer 2 Ethernet switch or directly to a
  layer 3 switch.
  The call server and distributed Media Gateway 1000E Media Card ELAN network interfaces must be in the
  same ELAN subnet. The Media Gateway 1000E SSC network interfaces must also be in the same ELAN subnet.
  Virtual LAN's can be used to accomplish this.
  If the ELAN subnet is configured as a routable subnet (connected to the rest of the IP network) a packet
  filtering gateway router, or firewall, must be configured to prevent broadcast, multicast, and
  unauthorized traffic from entering the ELAN subnet.

  The use of a broadcast and multicast rate limiting is recommended on the ELAN and TLAN subnets.

  The distributed Media Gateway 1000E Media Card TLAN network interfaces may be in a different TLAN subnet
  provided the distributed Media Gateway 1000E Media Cards are configured in their own node.

The Media Gateway 1000T component of the CS 1000E has not been included in this proposal.

CS1000 E/T

The Nortel Networks Communication Server 1000E (CS 1000E) is made up of 2 call servers, Media Gateway
1000E's, Media Gateway 1000T's, 2 or more signaling servers, and a terminal server.

Definitions:

ELAN – An ELAN is a dedicated subnet that is in its own broadcast domain. The ELAN stands for the Embedded LAN. This is a requirement for Nortel Networks voice over IP. The ELAN handles communication between the call servers, media gateways, signaling servers, media cards, applications, and other components. The following are notes concerning ELAN's:

  As noted above, the ELAN must be on its own broadcast domain.
  The ELAN used for the Media Gateway 1000T components (including the signaling server(s), main chassis, and additional chassis) can be on a 10/100BaseT Full Duplex LAN or higher.

TLAN – A TLAN is the part of the data network used for telephony voice and telephony signaling traffic. The TLAN must be a 100BaseT Full Duplex LAN.

Components:
The 2 call servers are rack mounted. They synchronize using a dedicated point to point crossover CAT 5 cable between them (unless Campus Redundancy is setup). They each require an ELAN connection. The COM 1 port of each call server will connect to the terminal server.

The terminal server is a rack mounted device used to provide serial port connections for applications of the CS 1000E.

Each Call Server COM 1 port is connected to this server. The server requires a connection to the data network.

The signaling servers are rack mounted and provide a number of functions including (and not limited to) terminal proxy service, H.232 & SIP Gateway, Network Routing Service, etc. Each signaling server requires an ELAN connection and TLAN connection.

The ELAN connection is 10BaseT Full Duplex. The TLAN connection is 100BaseT Full Duplex.

Voice Gateway Media Cards are TDM to IP conversion (or gateway) cards. These cards allow for the conversion from IP to TDM devices and back. Each Media Card requires an ELAN connection and a TLAN connection. These cards are placed in Media Gateway 1000E's to provide communication to conference ports, digital station ports, analog station ports, application ports, etc. They are placed in Media Gateway 1000T's to provide access to digital and analog trunk ports.

The Media Gateway 1000E's are media gateways used for digital devices, analog devices, analog trunking, conferencing, and other TDM connections except digital trunking. The Media Gateway 1000E's are 19" rack mounted.

Each Media Gateway 1000E has 4 card slots. An expansion chassis can be added for 4 more card slots.

The CS 1000E can support up to 30 Media Gateway 1000E's. The Media Gateway 1000E's are under direct control of the CS 1000E call servers. Each Media Gateway 1000E can support 2 ELAN connections. At least one is required.

The ELAN connections must be 100BaseT Full Duplex and connect through a layer 2 switch to the call servers. The use of the second ELAN connection would allow for the Media Gateway 1000E to be dual-homed thus providing redundancy.

Under some circumstances, Media Gateway 1000E's can be distributed around a LAN. Here are some of the guidelines:
  The distributed Media Gateway 1000E should be connected to a layer 2 Ethernet switch or directly to a layer 3 switch.
  The call server and distributed Media Gateway 1000E Media Card ELAN network interfaces must be in the same ELAN subnet. The Media Gateway 1000E SSC network interfaces must also be in the same ELAN subnet. Virtual LAN's can be used to accomplish this.
  If the ELAN subnet is configured as a routable subnet (connected to the rest of the IP network) a packet filtering gateway router, or firewall, must be configured to prevent broadcast, multicast, and unauthorized traffic from entering the ELAN subnet.
  The use of a broadcast and multicast rate limiting is recommended on the ELAN and TLAN subnets.

  The distributed Media Gateway 1000E Media Card TLAN network interfaces may be in a different TLAN subnet provided the distributed Media Gateway 1000E Media Cards are configured in their own node.

The Media Gateway 1000T is basically a trunking gateway. The Media Gateway 1000T is composed of 1 or more signaling servers and 1 to 5 media gateway chassis.

Each media gateway chassis has 4 card slots and an expander chassis can be added to support an additional 4 card slots. The Media Gateway 1000T supports up to 20 T1's/PRI's. Digital and analog trunking can be placed in the system.

Digital and analog stations cannot be placed in the system. The Media Gateway 1000T is not under control of the CS 1000E call servers. It communicates to the CS 1000E components using H.323 or SIP Access Port Licenses. This means the Media Gateway 1000T does not need to be co-located with the CS 1000E system and can be distributed across the network.

Media Gateway 1000 T
Definitions:
ELAN – An ELAN is a dedicated subnet that is in its own broadcast domain. The ELAN stands for the Embedded LAN. This is a requirement for Nortel Networks voice over IP. The ELAN handles communication between the call servers, media gateways, signaling servers, media cards, applications, and other components. The following are notes concerning ELAN's:

  As noted above, the ELAN must be on its own broadcast domain.
  The ELAN used for the Media Gateway 1000T components (including the signaling server(s), main chassis, and additional chassis) can be on a 10/100BaseT Full Duplex LAN or higher.

TLAN – A TLAN is the part of the data network used for telephony voice and telephony signaling traffic. The TLAN must be a 100BaseT Full Duplex LAN.

Components:
The 2 call servers are rack mounted. They synchronize using a dedicated point to point crossover CAT 5 cable between them (unless Campus Redundancy is setup). They each require an ELAN connection. The COM 1 port of each call server will connect to the terminal server.

Each Call Server COM 1 port is connected to this server. The server requires a connection to the data network.

The signaling servers are rack mounted and provide a number of functions including (and not limited to) terminal proxy service, H.232 & SIP Gateway, Network Routing Service, etc. Each signaling server requires an ELAN connection and TLAN connection.

The ELAN connection is 10BaseT Full Duplex. The TLAN connection is 100BaseT Full Duplex.

Voice Gateway Media Cards are TDM to IP conversion (or gateway) cards. These cards allow for the conversion from IP to TDM devices and back. Each Media Card requires an ELAN connection and a TLAN connection. These cards are placed in Media Gateway 1000E's to provide communication to conference ports, digital station ports, analog station ports, application ports, etc. They are placed in Media Gateway 1000T's to provide access to digital and analog trunk ports.

The Media Gateway 1000T (MG 1000T) requires an ELAN and TLAN connection for each signaling server. The main chassis of the MG 1000T requires an ELAN connection.

Each MG 1000T above and beyond the main chassis connects directly back to the main chassis of the MG 1000T using a point to point link (i.e. crossover Ethernet cable) or a layer 2 Ethernet switch.

Also each additional chassis requires an ELAN connection. The ELAN for the Media Gateway 1000T components needs to be isolated from the CS 1000E ELAN. It is a 10/100BaseT Full Duplex subnet. The TLAN is a 100BaseT Full Duplex network similar to the CS 1000E TLAN.

General Assumptions

The Customer's network architecture design shall not change during the ScOW term

AT&T requires a minimum lead-time of up to thirty (30) days from acceptance of a Purchase Order from Customer to begin work. AT&T will make commercially reasonable efforts to meet the requested installation date.

AT&T shall require a schedule extension of up to thirty (30) days for any personnel change requests made by Customer, including:

Services not covered under this Scope of Work

Support or replacement of Equipment that is altered, modified, mishandled, destroyed or damaged by natural causes, or damaged due to a negligent or willful act or omission by Customer or use by Customer other than as specified in the applicable AT&T-supplied documentation.

Services, software or hardware required for software or hardware problem resolution resulting from third party products or causes beyond AT&T's control.

Any Hardware upgrade required to run new or updated Software.

Data network reconfiguration to support this voice over IP system deployment.

Any PBX interface and/or configuration and Telco circuits changes or upgrades.

Network audits, network design, and network expansion, AT&T Consulting Services and or training that are offered under separate Purchase Order.

All Work will be performed over a consecutive time frame, unless otherwise specified.

Any changes to this Scope of Work must be requested via a Change Request document.

AT&T reserves the right to charge Customer for the full amount or a portion of the installation in the event that Customer cancels or reschedules any installation without 10 days prior written notice.

This excludes unforeseen events causing outages or issues, which may cause significant disruption to the business operations.

AT&T will not be responsible for the performance and voice quality of the transmissions of Voice over IP system over the customer LAN.

Should this design include redundancy, the architecture must conform to Nortel redundancy specifications. AT&T provides no commitment or guarantee related to the success of that redundant failover in the event of an outage.

The Customer agrees that AT&T DataComm and its authorized representatives shall have reasonable and free access to the equipment and all sites pertaining to the project. Any unreasonable delays, including but not limited to return visits required because of denial of reasonable and free access or failure of the Customer to complete agreed upon tasks required for completion of the job, will be billed additionally to the Customer.

Site Survey
AT&T Responsibilities

Mutually schedule the Site Survey(s) at each site location with the Customer site contact.

Conduct on-site Site Survey(s) for the Call Server, Power Patch Panels, and/or Media Gateway proposed locations. Individual phone and station locations will not be personally visited as a standard service.

Collect workgroup phone and station requirements so that IP phones may be properly configured.

Review and validate collected Site Survey information with Customer.

Review Site Survey information and deliver the Site Readiness Recommendations to the Customer.

Customer Responsibilities

Provide the station locations and the IP and sub-net mask addressing plan for the proposed Voice over IP system.

Provide information relative to Customer Provided Equipment ("CPE"), and the phone system model, interfaces and specifications, dial plan, cable distances and routes between the phone system and data equipment. This information should be provided for the existing and planned telephony requirements.

Identify desired Product, CPE and station equipment placement; any rack or cabinet layouts; circuit demarcation locations and specifications; PBX/telephony interface requirements and specifications; and system and station features.

Provide the building layouts, including floor plans, cabling, and power locations for all applicable sites.

Schedule with AT&T the Site Survey with each Customer site contact.

AT&T Project Management
AT&T Responsibilities

Manage the implementation of the proposed VoIP system. Project Management responsibilities include AT&T/contractor resource utilization and scheduling, Customer relationship issues, Equipment and Materials issues, training coordination, Job Change Orders, project-related correspondence, project acceptance documents, and project handoff documents to maintenance.

Act as the management contact focal point for project scheduling, coordination; change control, escalation, installation and acceptance activities for the AT&T implementation team effort under this Scope of Work. Activities include coordinating ordering, shipping, and delivery of Equipment and Materials to the installation site.

Provide a single point of contact for all project support issues within the Scope of this project. Such person shall have the authority to remotely act on all AT&T aspects of the Services described in this agreement.

Provide a project plan as agreed upon with the customer.

Oversee database collection, programming, and documentation of the proposed system configuration as agreed to with the customer. The customer must provide the required information in a timely manner. Project Management compiles and reviews the customer-provided data.

Confirm that the Customer has received and completed the Site Readiness Checklist.

Hold an initial "kickoff" meeting with Customer to review this ScOW. Changes to the project could impact the interval and the price.

Participate in regularly scheduled Customer project meetings for project status.

Jointly develop milestones and the detailed project schedule with the Customer.

Ensure that the system database and relation documentation is provided to Customer for authorization.

Review billing, system warranty, and repair procedures with Customer.

Customer Responsibilities

Designate a single point of contact for all project support issues within the scope of this project. Such person shall have the authority to act on all Customer aspects of the Services. This individual shall be responsible for defining Customer requirements, ensuring site readiness and implementing any adds, changes or deletions in equipment and/or facilities for each site prior to installation of the Communications Server 1000.

Ensure that required IP Address information is delivered by completing the Site Readiness Checklist before the scheduled "kickoff" meeting with Project Management.

Attend the AT&T Project Manager "kickoff" meeting to review the initial scope of work. Changes could impact interval and price of the project.

Provide input to AT&T for the development of Call Server, Media Gateways, applications, route plan, dial plan, call flow, IP station configuration and any additional information required to deploy the Communications Server 1000.

Attend AT&T Project Manager project status meetings at jointly agreed upon times. Missed dates may result in project delay or increased customer price.

Jointly develop the implementation schedule with AT&T Project Management.

Manage internal agency/departmental groups/decisions to meet jointly agreed to project plan dates.

Identify primary and backup Customer on-site contacts for all installation sites who shall be accountable to provide any special site access clearance, escort, safety training or information required. The site contact shall interface with other organizations as required.

Take responsibility to manage other vendors associated with the project that is not managed by AT&T. Failure to successfully manage other vendors may impact implementation dates or customer price.

Notify the AT&T Project Manager of any schedule changes at least ten (10) business days before any scheduled activity. Scheduling changes and/or cancellations made within the ten-day (10) window shall be subject to AT&T's then current cancellation charge.

Jointly develop with AT&T Project Management a common understanding for conduct of AT&T representatives with customer end users

Provide accurate, marked floor plans, data base records and cable records as applicable.

Provide a freeze date for changes to data base information. Validate data base information prior to freeze date and programming.

Provide timely acceptance of test results, system operation verification and documentation.

Review project financial data and billing

Be accessible during cutover for issue resolution.

Provide an internal or third party Network Administration resource at the appropriate time when integrating the Communications Server 1000 on the LAN, implementing and testing Voice over IP phones, and/or any other time network integration is required.

AT&T Deployment and System Integration
AT&T Responsibilities

Transport the Equipment from the warehouse facility to the designated installation locations within the same general site.

Unpack, inventory and inspect AT&T-provided Equipment at the installation location

After hours cutover and test plan execution shall be performed outside the Normal Business Hours.

Confirm that the Customer has completed the Site Readiness Checklist and verify with the customer contact that the network is ready for the installation of Communications Server 1000 Equipment.

Install and connect the Equipment to the Customer provided facilities at the agreed upon demarcation points in accordance with the documentation provided

Configure the Call Server, IP Stations, Applications, Dial Plan, and Classes of Service for maximum conformance to the Customer's system design defined with Project Management.

Test and verify operation of the installed Call Server, Media Gateway(s), applications and phone(s).

Perform system burn-in, testing, and verify system functionality per manufacturer specifications.

Provide remote technical support for the on-site engineer during installation, migration, cutover, and testing.

Troubleshoot/replace hardware failures relating to the installation/upgrade of the AT&T-provided Product.

AT&T is not responsible for exceeding 802.3 UTP cabling compliance when adding the Power Patch Panel.

Customer Responsibilities

Provide all configuration information including the Site Readiness Checklist and verify with AT&T that the network is ready for the installation of Communications Server 1000 Equipment. Include IP addresses, sub-net masks and existing DNS and DHCP server configurations information, if applicable.

Provide an adequate infrastructure for VoIP consistent with AT&T Design recommendations and product requirements.

Provide a single point of responsibility for all customer related issues (e.g., timely agency/department decisions and agreement to scheduling, change orders, project correspondence, training, acceptance and placing proposed system in service).

Provide an internal or third party Network Administration and, if applicable, a cabling technician resource at the appropriate time when integrating the Communications Server 1000 on the LAN, implementing and testing Voice over IP phones, and/or any other time network integration is required.

Complete all requirements for proposed system connectivity to non-AT&T-provided services prior to the installation date including:

   Raceways, boring and cutting, trenching, conduits, variances and rights or way required for installation

   Network service (LEC and IXC)
   Network demarcation
   MDF demarcation (includes documentation)

   Customer private network (e.g. LAN/WAN or privately provided facilities in a campus environment)

Interface with their network vendors in the case where the network is not AT&T provided, during the installation and testing to make network changes required to make the data/voice network operational. If delays are encountered due to the network vendor, charges at a time and material rate may apply.

Provide to AT&T accurate and complete cable records prior to the installation date.

Provide adequate secured storage areas on site for AT&T Equipment for the duration of the project. Assumes responsibility for any loss or damage of equipment upon delivery

Perform all upgrades and changes required by AT&T for the successful implementation of the Equipment. Ensure that proper environmental conditions are met and adequate power and grounding are available as specified at each site.   AT&T shall not proceed with the Equipment installation until such modifications and changes are made

Order, install, and test all data and voice circuits prior to the scheduled Installation date.   Ensure that Telco demarcations circuit identifications are clearly marked.

Verify all distance and interference limitations of interface cables to be used and that all necessary cabling, power and grounding is delivered and installed prior to the Installation date.

Provide a voice telephone and number near the Communications Server 1000 Call Server for use by AT&T.

Install and verify the operation of all CPE not provided by AT&T

Provide earthquake bracing, if required

Provide any security clearances, escorts, special safety equipment, and access training as required in order to allow AT&T access to the site for Equipment installation

AT&T Support Services

The DataComm Services Customer Care (DSCC) provides a 24x7 technical assistance resource for Voice over IP solutions such as Communications Server 1000. The DSCC is a component of AT&T PremierSERV Voice CPE Support Services for the Nortel portfolio that provides Technical Phone Support and options for on-site hardware replacement and access to software updates. PremierSERV Voice CPE Support Services are quoted separately

This ScOW states the responsibilities of the DSCC to successfully support your Voice over IP deployment, when PremierSERV Voice CPE Support Services are purchased by Customer.

AT&T Responsibilities

The DSCC is the primary Customer interface for trouble resolution and the first Customer point of contact for complex Voice over Internet Protocol (VoIP) products as defined by AT&T DataComm. The DSCC is responsible for the support of Communications Server 1000 components.

The DSCC manages AT&T's trouble resolution process and will make reasonable efforts to correct system failures.

The DSCC will provide Tier 1 and Tier 2 Technical Support for AT&T Complex VoIP products. AT&T Tier 1 support performs remedial hardware and application software diagnostics. AT&T Tier 2 support performs isolation and diagnosis of hardware and application software based problems.

The DSCC will escalate Tier 3 system issues with Nortel's Technical Assistance Center (TAC). Nortel TAC will support the DSCC with the system triage and remote resolution process. The DSCC acts as the single contact for TAC support.

The DSCC will remotely access the Communications Server 1000 IP Telephony servers through a Customer-provided secured access for remote diagnostics including triage of a hardware or application software failure and remote corrective action if possible.

AT&T is not responsible to resolve issues, corrective actions, or configuration settings for the networking equipment; client applications; application or operating system errors; data corruption; virus attacks; and other system intrusions.

The DSCC dispatches Field Services for components contracted for on-site maintenance services to replace hardware components as required. The Customer is responsible for restoration of the application (e.g. Communications Server 1000).

Incremental services such as system administration; equipment moves/adds/changes; network configuration; system configuration; end-user support services; system operation training; client or Operating System installation, configuration, updates or support; software upgrades; issue resolution of customer performed system configuration and other support on non-contracted services or devices are outside of the scope of work for AT&T PremierSERV Voice CPE Support and may be performed on a time and materials basis under separate order at the prevailing labor rate.

The DSCC can coordinate any additional services not defined in the maintenance scope of work and/or maintenance addendum at the current AT&T time and materials rate, MAC orders will be referred to the appropriate MAC/Sales office.

Customer Responsibilities

Provide an analog phone line access to the Call Server through customer-provided secured dial-in access, including the associated network and hardware for remote alarm management and diagnostic support.

Provide an analog phone line access to Optivity Telephone Management host platform, if available, through customer provided secured dial-in access, including the associated network and hardware for remote diagnostic support.

Equip the OTM Host Platform with the most current version of PCAnywhere software.

Customer must provide the valid information to AT&T and provide any updates to the DSCC.

Provide a single point of contact for all project support issues within the scope of this project. Such person shall have the authority to act on all Customer aspects involved with preparation.

Customer must contract with AT&T DataComm for PremierSERV CPE Support Services on all Communications Server 1000 IP components to access the AT&T DataComm Customer Support Center.

The Customer is responsible for maintaining a current software image of the Communications Server 1000 IP Telephony components by performing regularly scheduled backups as defined by Nortel for the Operating System and Application Software and make back up versions available as needed.

Customer is required to support the trouble resolution process, if requested by AT&T DataComm that might include the following activities:
  Power down/up
  Receive software patches and tools via e-mail, then copy and move the files to the identified hardware and execute or copy the program(s).

  Collect and e-mail to AT&T DataComm system information including application logs and trace files.

  Reboot servers, gateways switches and routers.
  Access and change IP Telephony server administration components.
  Establish test calls between IP Phones.
  Configuring routers, switches and gateways as needed

Customer is responsible to load, configure and maintain the current image of security software approved for use by the manufacturer.

The customer shall provide AT&T with remote access to the Communications Server 1000 IP Telephony systems through customer-provided secured access, including the associated network and hardware. Upon obtaining such access, AT&T shall be permitted to perform remote diagnostics including triaging hardware and software failures and performing remote corrective action, as desired by AT&T and if possible.

If required by AT&T DataComm, Customer agrees to download Software Upgrades for the IP Telephony or Data Networking equipment from the manufacturer over the Internet and upgrade to the latest Software, and or Operating System Software Update that has been approved for use by the manufacturer. This may require the Customer to upgrade to a more current release of Software that Customer has currently installed on the IP Telephony and/or Data Networking equipment and purchase and install all other components, including components contingent on the current release of software updates at no cost to AT&T DataComm.

If assuming PremierSERV CPE Support Services on an existing system, the Communications Server 1000 IP Telephony components must be upgraded to the current maintenance release level.

The Customer is responsible for maintaining any application software patches and/or bug fixes as documented by Nortel.

Customer expressly acknowledges and agrees that in no event shall AT&T be liable for (a) any disclosure of the contents or output of monitoring or diagnostic tools by AT&T's employee(s) or third party(s); (b) the security of Customer's network or for any unauthorized access to such network; (c) incidental or consequential damages resulting from the furnishing, performance, or use of such information

NET 6 Application Gateway

Summary

The Net6 Application Gateway provides Visual Voice Mail for Call Pilot 2.0, Corporate LDAP Directory access, and web based applications to the screens of Nortel Networks i2004 IP Phones while connected to a Nortel Succession system with release 3.0 software.

The following section defines how the Net6 Application Gateway will be supported and sets expectations for responsible parties to ensure a successful implementation and post-installation support for the Net6 Application Gateway product.

This Statement of Work between AT&T DataComm ("AT&T") and [Customer's name] ("Customer") provides information and terms and conditions regarding the implementation and post-installation support of the Net6 Application Gateway product for deployment with the Customer's Nortel Succession 1000 or 1000M 3.0 system.

AT&T will, as stated herein, perform Services including System Design and Pricing, Tier 1 Help Desk Support, 3rd party Implementation support, and 3rd party maintenance support for the Net6 Application Gateway. The purpose of this ScOW is to express the Parties' mutual goal for a successful Net6 Application Gateway implementation and state each Party's individual responsibilities for implementation of the deployment project.

"AT&T DataComm" as used herein refers collectively and individually to: AT&T DataComm, Inc.; AT&T DataComm, a registered d/b/a of Southwestern Bell Telephone, L.P.; and the AT&T DataComm divisions of Pacific Bell Telephone Company and Nevada Bell Telephone Company. All logos and product and service names are the trademarks and/or registered trademarks of their respective owners.

AT&T DSCC (Data Service Customer Care) Help Desk Support for Net6 Application Gateway
AT&T Responsibilities

Help Desk Services will be provided by the AT&T Data Services Customer Care (DSCC) Help Desk to serve as the primary Customer interface and first point of contact for technical support, fault isolation, and trouble resolution related to the Net6 Application Gateway.
The DSCC Help Desk manages AT&T's trouble resolution process from start to finish.

The DSCC Help Desk will provide Tier 1 technical support by isolating and validating suspected faults are associated with the Net6 Application Gateway. The DSCC Help Desk will open up technical support and/or repair tickets with Net6 as required and will manage the trouble resolution process with Net6 until the requested technical support information is provided and/or reported problem/s are corrected

The DSCC Help Desk will refer all requests for Tier 1 & Tier 2 technical support and repair support to Net6 for resolution.
AT&T will provide on site repair support when requested and will bill the Customer for these services at the current AT&T DataComm time & material rates.
The DSCC Help Desk will escalate Tier 3 product issues with the Nortel Global Network Technical Support (GNTS) and Net6 support teams. Nortel GNTS and Net6 will provide support to the DSCC Help Desk for system triage and remote restoration. The DSCC Help Desk will be the single point of contact for Nortel GNTS support.

The DSCC Help Desk will remotely access the Net6 Application Gateway through Customer provided, secured IP/VPN access for remote diagnostics including triage of hardware and software failures. Net6 will handle remote corrective action as required.

The DSCC Help Desk will dispatch AT&T Field Services to replace failed Net6 hardware component/s when requested and will bill the Customer at the current AT&T DataComm Time & Material rates for on site services.

Net6 Responsibilities

Net6 will provide Tier 2 and Tier 3 technical support to AT&T and the Customer as required.

Net6 will provide AT&T and the Customer support for remote diagnostics and configuration on the Net6 Application Gateway software and hardware components as outlined in the Net6 maintenance service agreements in accordance with the Net6 support level purchased by the Customer.

Net6 will provide remote maintenance services on the Net6 Application Gateway. The Net6 support organization in coordination with the DSCC Help Desk, will remotely access the Net6 gateways through customer-provided IP/VPN access for remote diagnostics including triage for hardware and/or software failures and remote corrective action if possible.

Alternatively, if the customer is unwilling to provide AT&T or Net6 IP/VPN based access to the Net6 Application Gateway, the customer agrees to perform any configuration changes or software uploads with telephone assistance from AT&T and Net6 via telephone support.

Customer Responsibilities

The Customer is required to purchase annual Net6 maintenance services and AT&T DSCC Help Desk support services on all Net6 Application Gateway equipment and software purchases. These services are required as part of the Net6 product purchase and override the terms and conditions described in the AT&T Voice Addendum for AT&T maintenance services. AT&T and Net6 will provide post-installation support services only when there are current Net6 maintenance and AT&T help desk agreements in place.

The Customer is required to provide remote access to the Net6 Application Gateway through Customer-provided secured IP/VPN access, including the associated network and hardware, so AT&T and Net6 may perform remote diagnostics including triaging hardware and software failures and performing remote corrective action whenever possible.

The Customer is required to provide valid access information to AT&T and provide any changes/updates to AT&T on an ongoing basis.

The Customer is responsible for maintaining protection and security policies for their networks to ensure their networks are safeguarded from intrusions, attacks, and viruses.

The Customer expressly acknowledges and agrees that in no event shall AT&T be liable for (a) any disclosure of the contents or output of monitoring or diagnostic tools by AT&T's employee(s) or third party(s); (b) the security of Customer's network or for any unauthorized access to such network; (c) incidental or consequential damages resulting from the furnishing, performance, or use of such information.

Implementation Support for Net 6 Application Gateway

AT&T Responsibilities

A AT&T Project Manager will initiate contact between Net6 and the Customer for Net6 to perform on site installation coordination.

Order and coordinate delivery of the Net6 components to the designated customer installation site.

Coordinate with the Customer any required PBX upgrades, programming, and connectivity required for the PBX as defined in the PBX scope of work.

The AT&T Project Manager will obtain Customer acceptance and trigger final billing after the Net6 Application Gateway is installed.

Provide the Customer with instructions and telephone numbers for obtaining service from AT&T post-installation.

Net 6 responsibilities

Net6 will install and configure the Application Gateway including: Initial setup, IP networking, and security configuration. Net6 will also provide support configuring the integration of the Net6 Application Gateway with CallPilot for the Visual Voice Mail and the LDAP Corporate Directory applications. Net6 on site installation services must be purchased.

Provide for the physical installation and initial programming of IP addresses and routing settings of the Application Gateway including Gateways and DNS settings required to enable basic IP connectivity.

Install and connect the equipment to the Customer provided facilities at the agreed upon demarcation points in accordance with the documentation provided.

Provide any recorded configuration information

Provide assistance with the programming of i2004 telephones and wireless devices to access the Net6 Application Gateway

Transformations of applications are provided by Net6 via professional services and are provided at additional cost.

Customer Responsibilities:

Provide a single point contact on Customer site during the Net6 Application Gateway installation.

Provide all configuration information and verify the network is ready for the installation of the Net6 Application Gateway

Include IP addresses and sub-net masks and existing DNS and DHCP server configurations information, if applicable.

Provide AT&T and Net6 IP connectivity to the Net6 Application Gateway when required to verify any configuration parameters that are related to the installation and maintenance support processes outlined in the ScOW.

Provide AT&T and Net6 physical access to the Application Gateway and the facilities where it resides as it relates the installation of the physical hardware.

Provide, Install, and Program any i2004 phones that are intended to access the Net6 Application Gateway.

Ensure the M1 PBX or Succession 1000 / 1000M platforms are upgraded to Succession release 3.0.

Provide any required network connectivity or programming on the Succession 3.0 system.

Ensure the Customer's IP network is capable of handling VoIP traffic as outlined in the Customer Network Readiness Acknowledgement section of this ScOW.

Ensure minimum requirements for the Net6 Application Gateway are present as described in the Net6 Application Gateway Minimum Requirements section of this ScOW.

Net 6 Application Gateway Minimum Requirements.

Minimum Requirements for the Net6 Application Gateway are as follows:

The Net6 Application Gateway is compatible with: Meridian 1 PBX with Succession release 3.0 software, Succession 1000 with Succession release 3.0 software, and Succession 1000M with Succession release 3.0 software; i2004 Telephone with Release 1.59 Firmware and CallPilot Release 2.x (for Visual Voice Mail Application Module)

Network requirements include:

A minimum of 1 Static IP address

IP connectivity either on the same LAN or via gateway to:

The i2004 phones using the Net6 application

CallPilot release 2.0 or higher server (If implementing Visual Voice Mail)

The LDAP directory server with appropriate log on credentials (if implementing LDAP based Corporate Directory

Any application or web servers hosting content for presentation on the i2004 phones or Mobile devices

1RU space in 19" server rack

110 AC power

A PC workstation running Windows 2000 or Windows XP OS with Internet Explorer 5.0 or higher for Administration and Design Studio custom development software

PC capable of connecting to the Application Gateway via 9 pin Null Modem cable (For installation and trouble shooting only)

THE PARTIES AGREE THAT IMPLEMENTATION OF THE NET6 APPLICATION GATEWAY IS SUBJECT TO THE TERMS AND CONDITIONS OF THE PARTIES' MASTER AGREEMENT AND THIS ATTACHED STATEMENT OF WORK.

So agreed by the Parties authorized signatories:

_____
Customer

_____
Name

_____
Title

_____
Date

AT&T DataComm

Name _____

Title _____

Date _____

Options

Nortel Contact Center Scope of work Section

AT&T Professional Services

Please see AT&T Professional Services Scope of Work for Custom Labor components (ACD scripting or CTI Integration and any additional customer server requirements)

Nortel Contact Center Suite Release 6.0:

AT&T Customer Readiness Requirements

Introduction:

This Checklist ensures that your company is ready for the AT&T installation and support of the Nortel Contact Center Suite Release 6.0 (CC6).

A pre-implementation site survey will be completed by AT&T and the customer to determine the placement of the CC6 server and ancillary devices. AT&T resources will install the CC6 server, connect to the customer's LAN and test the integration to the host PBX.

AT&T Project Management will work with your designated coordinator to review A pre-installation checklist. AT&T will INSTALL The CC6 Software with single CC6 client application unless otherwise contracted.

If, at the time of AT&T installation, or post-cutover operation CC6's Application Servers and/or Client PC configurations are incomplete or incorrect, you may incur additional installation hours and costs.

Training

Contact Center Release 6 Supervisor Training:
AT&T has included training for up to 5 Supervisors

Sessions will include 5 participants at a terminal or up to 10 participants in a classroom setting with a projector and PC with Web Client software loaded. Upon completion of this hands on training session, the student will be able to use Symposium Web Client to manage their call center resources and monitor call center performance.

The course outline will include an introduction and description of the system. Contact center management, which includes skillset and scheduled assignments. Real-time displays, public, private, graphical and Agent desktop displays. Creating and scheduling historical reports.

Customer Resources

Provide appropriate resources to the AT&T Team to gather and verify system configurations.
Provide IT resources when integrating the Servers on the Customer's LAN, loading Client applications, and integration systems as needed.
Make appropriate changes to the Customer's virus protection software operating system patches and peripheral software of this nature.

Customer Readiness

Nortel PBX

Complete all required Nortel PBX and Call Pilot hardware/software upgrades before the CC6 installation.

Provide one Controlled Directory Number for testing purposes
Provide two ACD phones with ACD lines for testing purposes

Call Pilot is an optional resource used for Controlled Broadcast, Give IVR, Collect Digits, Play Prompts, Play Expected Wait Time, and Host Exchange Voice Processing. If any of these services are required, please provide basic call routing, before the sale, to estimate the number dedicated Call Pilot ports.

All Call Pilot ports required for CC6 are dedicated to the CC6 application. The final system design and actual traffic patterns determines the actual number of Call Pilot ports required. The customer is responsible for providing any incremental Call Pilot ports.

During the installation, provide a minimum of three Call Pilot ports dedicated to the CC6 application for Access and a mailbox to test the meridian access connection.

AT&T Confidential and Proprietary
The terms and conditions in this document cannot be altered without AT&T legal approval

Customer LAN

Provide a functional LAN with the TCP/IP protocol installed and operating on the network

Provide a CLAN drop, jacks and cables ready to connect the Nortel Call Center Suite. Contact Center Manager Server connects to client PC's through the customer's TCP/IP network. Performance of the server can be impacted by the bandwidth available on the customer's LAN. The customer's LAN must be equipped with appropriate bandwidth to support traffic between Client PCs and Contact Center Manager Server.

Customer Server Provided Requirements

Customer must read, understand, and take full responsibility for the latest version of the Nortel Product Bulletin entitled CC6 Portfolio Server and Operating System Requirements, for minimum hardware specifications, technical recommendations and supported and non-supported configurations.

In addition, if there are any areas that seem unclear, lacking detail, or if the Network Communication Controller (NCC) is a part of the system, please refer to the latest version of the Nortel Networks Nortel Call Center Suite Planning, Installation and Administration Guide.

Customer is required to supply VPN access using Nortel client or a Hayes compatible modem and analog line for remote communication and printer configured (but not necessarily attached) to the PC.

Customer is responsible for insuring that server and client PCs adhere to Nortel specifications. If AT&T is engaged to resolve server and client PC issues resulting from non-compliance to Nortel specifications, additional AT&T costs will apply.

Customer must make the servers available to AT&T for staging purposes. Please ship these to AT&T Memphis Staging Center when requested. The servers should be in a 'virginal" state without any software loaded OR have ONLY the Windows Operating System software. The standard Windows server software CDs should always accompany the servers, just in case they are needed by the staging and implementation. If the Customer chooses to have the disks partitioned before the server is sent to AT&T for installation of the CC6 software, the CC6 server must not have more than 8 GB partitioned on the C drive.

AT&T prefers to perform disk partitioning on the servers, with the Customer providing any specific desired configurations. The servers must conform to a standard addressing schema. On the CC6, Com 1 port must be assigned with Interrupt 4 and Addressing 3F8. Com 2 port must be assigned with Interrupt 3 and Address 2F8. This industry standard configuration will allows for the successful verification of the server with the Nortel PVI Checklist Utility.

Customer may load additional utilities after the servers is staged by AT&T ONLY IF Customer assumes the possible risks of billable AT&T Support intervention and re-building of the servers, should the Customer's post-staging modifications impact the performance of CC6 and WC.

If modifications are made to the hardware configurations, the Customer is responsible to test and insure compliance of their actions with the Nortel applications. Prior to making any changes, the Customer should consult with Nortel documentation on what utilities are compatible with CC6, in order to insure a successful implementation. If AT&T is engaged to resolve any issues of this nature that are initiated by the Customer, additional costs will apply.

Nortel CC 6 Documentation can be found at http://www130.nortelnetworks.com/cgi-bin/eserv/cs/main.jsp?cat=DOCUMENTATION&resetFilter=1&tranProduct=8556

CC6 Server Configuration

Customer must provide two IP addresses for Remote Access Service dial-in support. These IP addresses must be on the same CLAN subnet as the Server and preferably in sequence.

Customer must supply One (1) external modem for remote support (U.S. Robotics recommended).

Customer may provide an optional uninterruptible power supply for the server if desired.

Server Facilities

Customer must provide the following facilities: Space for the servers and peripherals, a dedicated AC power within 6 feet of the proposed server location with 4 or 6 receptacles within an environmentally controlled environment.

IP Addresses and Names

At the time of the pre-installation review, an IT representative must complete the Customer's section of the "CC6 Site Readiness Checklist" document.

Information includes the TCP/IP Network Information for the Server, IP addresses and names for the customer client PCs, Nortel PBX or Succession switch, Call Pilot, or CallPilot, other equipment accessible through the CLAN and the ELAN and user name, password, and domain name for access to CLAN if additional client PCs are required.

IP addresses are required to support communication between the Communication Server 1000/Meridian 1 and Contact Center Manager Server
·Switch Ethernet Link (ELNK):

    o One IP address assigned to each CPU in the switch to facilitate TCP/IP network communication

·Contact Center Manager Server:
    o One IP address for Nortel Server subnet communication
    o One IP address for ELAN subnet communication (active Ethernet port)
    o Optional: One IP address for ELAN subnet communication (Standby Ethernet port)
    o Two IP addresses for Remote Access Service (RAS)

Client Installation Support

A representative from the Customer's IT department must be available on the day(s) of installation to:

Support the Client Installation and resolve potential DLL conflicts.
Resolve any customer provided hardware, LAN connectivity issues, as well as any other customer readiness issues.

Windows Operating System

The Nortel Contact Center Manager Server requires the Windows Server 2003 (Standard or Enterprise Edition) operating system. This Windows operating systems is supplied by Microsoft and is the most widely-used server operating systems for business applications. Beginning with the Contact Center Manager Server 6.0 SU02, Nortel's solution supports Service Pack 1 for the Windows Server 2003 operating system.

Contact Center Manager Server Requirement

·A minimum configuration supports contact centers with less than 600 agents with the following:

    o Size: Less than 600 agents, Less than 12000 calls per hour
    o License Manager = Yes
    o Open Queue = No
    o Universal Networking = No

CPU
·Intel-based CPU
·Xeon 2 GHz
    o Supported processors Pentium IV, Intel Xeon, (32 bit currently and 64 bit schedule for support later)
and   Intel Xeon DP, Dual and Quad CPU

    o Nortel does not support Pentium III, Intel Celeron, Intel Itanium (IA 64), and AMD Processors

    o Use the Contact Center Capacity Assessment Tool (CapTool) to ensure your server meets the requirements of your contact center.

RAM
·1GB
·(2GB if CCMS is supporting Open Queue or Universal Networking (post General Release))

Hard Disk Space
·40 GB logical disk space (80 GB physical disk space with RAID 1)

Hard Disk Partioning
·1 physical drive

Hard Disk Type

·SCSI or SATA
   o   IDE drives not supported. At this time, a Storage Area Network (SAN) configuration is not
supported.

Hard Disk Speed
·7200 rpm minimum

Floppy Drive
·One Floppy Drive
   o   The drive letter must be A:\

   o   Required for drive installation, Microsoft server recovery programs, and related procedures.

DVD-ROM
·One DVD-ROM drive
   o   The drive letter must be E:\
   o   Minimum speed is 4X
   o   Required for software installation & configuration

Modem
·One External Modem
   o   33.6 kbits/sec minimum, compatible with US Robotics Sportster 33.6 modem. For remote technical
support. USB modem are supported.

Serial Port
·One Serial port (for modem access) or USB port if using USB modem)

Parallel Port
·Not required

Network Interface
·1 Network Interface card (NIC) if ELAN subnet/Nortel Server subnet routing capability available.

·For isolated ELAN subnet and Nortel Network Server subnet, 2 NIC cards required.
   o   ELAN subnet must be 10/100 Mbps Ethernet. Recommended Nortel Server Subnet should be 100Mbps
Ethernet
   o   Only Ethernet is supported. Token Ring is not supported.

Video Card
·One video card and monitor
   o   800X600 minimum resoluti

Keyboard
·One Keyboard
   o   The server does not support a headless operation

Mouse
·One mouse

Backup and Restore
·Can be tape drive or remote directory
   o   If you use a tape drive, the drive must be large enough to hold all the backup data for the complete
database on a single backup tape

   o   SCSI tape drive must be listed on the Microsoft Compatibility List for Windows Server 2003.

   o   You can use ¼ -inch cartridge and 4-mm and 8-mm digital audio (DAT) format drives.
   o   The drive can be internal or external to the server and must be Sybase compatible.

Nortel does not supply server and client hardware; the customer or channel partners must supply the
hardware. Several prerequisite conditions must be met before you can successfully install Contact Center
Manger Administration software.

Prerequisites:

The appropriate hardware and software prerequisites must be in place to support Contact Center Manager Administration. Contact Center Manager Administration 6.0 requires the following:

Contact Center Manager Administration Release 6.0 supports Contact Center Manager Server Release 6.0 and Symposium Call Center Server Release 5.0 (new release 6.0 features will be unavailable).

Contact Center Manager Server Utility is required for server maintenance utilities, such as backup and restore, voice prompt editor, event browser and server performance monitor.

Nortel support personnel can use three types of remote support.
·The Host version of pcAnywhere version 11.5 or later: you must install pcAnywhere on the Contact Center Manager Administration
·Virtual Private Network (VPN): It is more secure than direct connected modems. While many VPN technologies and configurations are available, for remote support of Enterprise voice equipment, Nortel supports a standard with technologhy based on the VPN Router 1100 (as a minimum) in a particular host-to-gateway configuration.
·Microsoft Remote Desktop Connection for Administration as remote support access tool for customers on a Windows 2003 platform.

Third-party Software Requirements

Due to the mission-critical, real-time processing performed by Contact Center applications, you must not install any other application class software on the server. You can install certain utility class software on the server, providing it conforms to the guidelines listed in this section. Application class software generally requires a certain amount of system resources and must not be installed on any server running Contact Center applications.

Utility Class Software
The following are generic guidelines for utility-class software:
·During run-time, the utility must not degrade the Contact Center application beyond an average percentage of CPU. For optimal performance, average CPU use on both the Contact Center Manager Administration server and the client should not exceed 70% over at least a 15-minute period. Furthermore, the utility must not lwer the minimum amount of free hard disk space required by the Contact Center application and the Microsoft Windows Operating system
·The utility must not cause any improper software shutdowns or out-of-sequence shutdowns.
·The utility must not administer the Contact Center application

·If the utility has it own database, it must not impact the Contact Center application database

·Disk compression utilities must not be used.
·Memory tweaking utilities (for example, WinRAM Turbo, Memory Zipper, and so on) used to reclaim memory that is unused by Microsoft should not be used.
·The installation or un-installation of the third-party software must not impact or conflict with the Contact Center application, for example, it must not cause DLL conflicts. If such conflicts are discovered, a rebuild of the server may be necessary.

·The implementation personnel must perform tests to ensure these conditions and recommendations are met prior to putting the Contact Center application into production. Nortel/AT&T support personnel can ask for the results of the testing during fault diagnosis. As part of the fault diagnosis process, the distributor or end-user may be asked to remove third-party software

Anti-Virus Software

Nortel acknowledges that some security policies can require the installation of anti-virus software on the Contact Center application server. Nortel has selected a representative sample of anti-virus software packages and has a policy of performing validation of these products to ensure co-residency with our Contact Center application products. The current suite of anti-virus products that are used as part of this policy are as follows:

·McAfee Netshield
·NAV corporate edition
·eTrust Anti-virus

The following are generic guidelines for anti-virus software:
·The Contact Center application must be installed before the anti-virus software. When the anti-virus software is installed, it is the company responsibility to perform testing with the anti-virus software, in accordance with the guidelines for utility-class software

·During PEP installations on both the client and server, all anti-virus functionality should be disabled—for example, firewalls, (passive) scanning, auto-updates, and son on—and should not start up automatically until the entire Contact Center application installation procedure is complete. Re-enable anti-virus functionality afterwards, as required.

·Virus scans must be set to run during off-peak hours and not to start on the hour.

·Anti-virus software must not be configured to deal automatically with suspected infected files. If infected files are located, do not attempt to replace or remove them. Contact your local Nortel support representative for assistance in determining if the files are part of the Contact Center application or a critical system file.

·Do not connect a Contact Center application directly to the Internet to download virus definitions or updated files. Furthermore, Nortel recommends that you do not use a Contact Center application client PC to connect to the Internet. Instead, you must download virus definitions and updated files to another location on your network and manually load them from this interim location onto the Contact Center application platform. Nortel publishes a list on the PIC that is routinely updated with Microsoft Hot Fix validation updates.

·Nortel recommends downloading PEPs/SUs to another location on the customer's network and manually load them from this interim location onto the Contact Center application platform. This method limits access to the Internet, and thus reduces the risk of downloading infected files. AT&T will download these PEPs for the customer.

·Nortel recommends that you scan all PEP/SU files, CD-ROMs, and floppy disks before installing or uploading them to the server. This practice minimizes any exposure to infected files from outside sources

Contact Center Manager Administration runs on a customer supplied, dedicated computer. Following is the recommended requirements. Specific hardware requirements depend on your contact center size. The Nortel Contact Center Release 6.0 Capacity Assessment Tool (CapTool) can be used for detailed analysis for your system hardware requirements.

CPU
-Xeon 2.8 GHz Single Xeon or Pentium IV
    o Supported processors Intel based CPUs only):
        § Pentium IV
        § Intel Xeon, (32- & 64bit), and Xeon DP
    o Nortel does not support:
        § Pentium III
        § Intel Celeron
        § Intel Itanium (IA 64)
        § AMD Processors

RAM
·2GB

Hard Disk Space
·40 GB physical disk space (80 GB physical disk space with RAID 1)

Hard Disk Partioning
·1 physical drive

Hard Disk Type
·SCSI or SATA
    o At this time, a Storage Area Network (SAN) configuration is not supported.

Hard Disk Speed
·7200 rpm minimum

Floppy Drive
·One Floppy Drive
    o The drive letter must be A:\

DVD-ROM
·One DVD-ROM drive

Modem
·One External Modem
    o 33.6 kbits/sec minimum, compatible with US Robotics Sportster 33.6 modem.

Network Interface
·1 Network Interface card (NIC)
    o Nortel Server Subnet myst be 100 Mbps (Ethernet)

Video Card
·One video card and monitor
    o 1024X768 minimum resolution. The server does not support headless operation.

Keyboard
·One Keyboard
    o The server does not support a headless operation

    o The keyboard and mouse must be supported by the backup system used for the server. For example, a
backup   system that boots from a floppy disk might not support a USB keyboard or mouse.

Mouse
·One mouse

Backup and Restore
·Can be tape drive or remote directory

Customer Provided:
·Microsoft Windows Server 2003 (Standard or Enterprise Edition) with SP1.

    o Upgrade to new service packs as recommended by the vendor (Microsoft) and approved by Nortel.

·Internet Information Services (IIS)
    o IIS installs with Windows 2003
·Simple Mail Transfer Protocol (SMTP)
    o SMTP installs with Windows 2003
·Sybase Open Client v 12.5
    o Required for Historical Reporting and Contact Center Management components. Supplied on the Nortel
Contact   Center - Manager installation DVD.
·Microsoft Internet Explorer 6.0 with a minimum of Service Pack 1 (required if the application server is
used as a client)
    o Required for support personnel to access the application server.
    o Upgrade to new service packs per Microsoft recommendations.
·Crystal Enterprise 10 Embedded
    o Used for reports. Supplied on the Nortel Contact Center _ Manager installation DVD
·pcAnywhere version 11.5 (Host Only)
    o Tool that provides remote access to Nortel Service.
    o Supplied on the Nortel Contact Center - Manager installation DVD.

The requirements listed below are recommended and apply to the client PC as well as PCs running Agent
Desktop Displays:
CPU
·Intel-based CPU
RAM
·128 MB 256 MB
Hard Disk Space
·40 GB
Hard Disk Partitioning
·No specific requirements
Hard Disk Type
·IDE/SCSI Bus for hard drives
Hard Disk Speed
·7200 rpm minimum
Floppy Drive
·Not required, but if installed must be on letter A:\
CD-ROM
·One CD-ROM drive
Network Interface
·1 Network Interface card (NIC)
Video Card
·One video card and monitor
    o 1024 x 768 is recommended for optimal display quantity.

Keyboard
·One Keyboard
Mouse
·One mouse
Serial Ports
·One serial port (if connection of the M1 Data Extraction Tool to the M1 switch using a serial port is required).

Client Software Requirements
Customer Provided
·Windows 2000 Professional (SP 4) or higher
·Windows 2000 Server/Advanced Server
·Windows Server 2003 (Enterprise or Standard Edition) on the application server only.
·Windows XP Professional (SP 2) or higher
·Microsoft Internet Explorer 5.0 SP1 or later
·Excel 2000 Service Release 1a is required for the Configuration Tool spreadsheets used to upload and download configuration data.
·Simple Object Access Protocol (SOAP) version 3.0 merge module. ClientSoap.msi is included in the Nortel Contact Center – Manager installation DVD.

Note: Nortel recommends that customers upgrade to new service packs according to Microsoft recommendations. Critical service packs can include security enhancements.

Contact Center Express 6.0 is a software only application. The customer must provide the following hardware:

PVI Server Platform
The server platform is a customer supplied server on which the Contact Center Express 6.0 server software application and the co-resident client software application are installed.

The Contact Center Express 6.0 PVI server platform requires one of the following operating systems that must be installed on the C:\ partition
·   Windows Server 2000 Standard Edition
·   Windows Server 2003 Enterprise Edition
·   Windows 2000 Server
·   Windows 2000 Advanced Server

The minimum supported processor for the supported Windows server operating system are as follows:
·   500 MHz Pentium III (Windows 2000 Server operating system only)
·   733 MHz Pentium III (required for Windows Server 2003 operating system)

Supported Server Processors for the Contact Center Express 6.0 are:
·   Pentium III
·   Pentium III
·   Intel Xeon
·   Intel Xeon DP

Servers NOT supported include:
·   Intel Celeron
·   Intel Itanium (IA 64)
·   Intel Xeon XP

Contact Center Express Release 6.0
The Contact Center Express 6.0 requires a minimum of 256 Mbytes RAM memory.

The Contact Center Express 6.0 PVI server platform requires a minimum of 9 Gbyte total hard drive space. Nortel recommends 12 Gbytes. The C: drive must be configured as a Primary Partition and any subsequent partition must be configured as Logical drives with Extended partitions.

Standalone client PCs
The Contact Center Express 6.0 client application software can also be installed on standalone cline PCs that connect to the server via the CLAN. These client PCs serve as supervisor workstations and can support Graphical Real Time Displays (GRTD), and reports.

The following operating systems are supported for Contact Center Express 6.0 standalone client PCs.

   Windows 2000 Professional (with Service Pack 3)
   Windows XP Professional (with Service Pack 1)

The minimum CPU required for a Contact Center Express 6.0 standalone client PC is 166 MHz Pentium II processor.

The recommended minimum RAM memory for Contact Center Express standalone client PC is 64 Mbytes. Increasing RAM memory generally improves responsiveness.

The minimum size of the hard drive required for Contact Center Express 6.0 standalone client PC is 2 Gbyte with a minimum of 350 Mbytes of free space. The total hard drive space required depends on the options that are installed.

In addition to the hard drives, a Contact Center Express 6.0 standalone client PC requires the following drives to install and maintain the operating system and client application software:

   CD-ROM dive (4x speed minimum)
   3.5" floppy drive

The following peripheral equipment is required for use with the Contact Center Express 6.0 standalone client PC.
   SVGA monitor with the following specifications:
   14" (a 15" or 17" monitor is optional)
   1024 x 768 recommended minimum display setting
   Keyboard
   Mouse
   Network Interface Card (NIC) for connection to the CLAN.

The following software applications must be installed on a standalone client PC to work with the Contact Center Express 6.0 client application
   Internet Explorer release 5.5 (Service Pack 1) or later
   Microsoft TCP/IP protocol installed and configured
   Adobe Acrobat Reader with the Search Plug-in

Agent PCs

The agent PCs are optional and can be used with CTI applications to provide customer information to the contact center agents. Agent PC can also run the SymonView II application software that provides real-time performance agent dashboard that displays key agent scorecard data fields.

New SCCS is not included

Upgrade SCCS
Upgrade SCCS on an existing Server

AT&T will perform software upgrade only on the existing server. No script changes are included,and no other hardware config changes will be made. The customer will contiue using the server as is.

Upgrade SCCS on an new Server meeting all Nortel Specifications
AT&T will perform a software upgrade and conversion of existing database, test the new server, connect to PBX, test PBX connections, test printers and clients, check reporting capability. Load the scripts and activate the system.

AT&T Professional Services
Please attach and see AT&T Professional Services Scope of Work.

Symposium Call Center Server Release 5.0:
AT&T Customer Readiness Requirements
Introduction:

This Checklist ensures that your company is ready for the AT&T installation and support of the Symposium Call Center Server (SCCS) and Symposium Call Center Web Client (SCCWC) application.

Project Management will work with your designated coordinator to review A pre-installation checklist. AT&T will INSTALL The SCCS Software with single SCCS client application AND SCCWC unless otherwise contracted.

If, at the time of AT&T installation, or post-cutover operation SCCS, SCCS Client, SCCWC and or Graphical Real Time Display (GRTD) the Application Servers and/or Client PC configurations are incomplete or incorrect, you may incur additional installation hours and costs.

Customer Resources

Provide appropriate resources to the AT&T Team to gather and verify system configurations.

Provide IT resources when integrating the Servers on the Customer's LAN, loading Client applications, and integration systems as needed.

Make appropriate changes to the Customer's virus protection software operating system patches and peripheral software of this nature.

Customer Readiness

Meridian 1 PBX

Complete all required Meridian 1 and Meridian Mail hardware/software upgrades before the Symposium installation.

Provide one Controlled Directory Number for testing purposes

Provide two ACD phones with ACD lines for testing purposes

Meridian Mail is an optional resource used for Controlled Broadcast, Give IVR, Collect Digits, Play Prompts, Play Expected Wait Time, and Host Exchange Voice Processing. If any of these services are required, please provide basic call routing, before the sale, to estimate the number dedicated Meridian Mail ports.

All Meridian Mail ports required for Symposium are dedicated to the Symposium application. The final system design and actual traffic patterns determines the actual number of Meridian Mail ports required. The customer is responsible for providing any incremental Meridian Mail ports.

During the installation, provide a minimum of three Meridian Mail ports dedicated to the Symposium application for Access and a mailbox to test the meridian access connection.

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Customer LAN

Provide a functional LAN with the TCP/IP protocol installed and operating on the network

Provide a CLAN drop, Jacks and cables ready to connect the Symposium Call Center Server

Customer Server Provided Requirements

Customer must read, understand, and take full responsibility for the latest version of the Nortel Product Bulletin entitled Symposium Portfolio Server and Operating System Requirements, for minimum hardware specifications, technical recommendations and supported and non-supported configurations.

In addition, if there are any areas that seem unclear, lacking detail, or if the Network Communication Controller (NCC) is a part of the system, please refer to the latest version of the Nortel Networks Symposium Call Center Server Planning, Installation and Administration Guide.

Customer is required to supply a Hayes compatible modem and analog line for remote communication and printer configured (but not necessarily attached) to the PC.

Customer is responsible for insuring that server and client PCs adhere to Nortel specifications. If AT&T is engaged to resolve server and client PC issues resulting from non-compliance to Nortel specifications, additional AT&T costs will apply.

Customer must make the servers available to AT&T for staging purposes. The servers should be in a 'virginal" state without any software loaded OR have ONLY the Windows Operating System software. The standard Windows server software CDs should always accompany the servers, just in case they are needed by the staging and implementation. If the Customer chooses to have the disks partitioned before the server is sent to AT&T for installation of the Symposium software, the SCCS server must not have more than 8 GB partitioned on the C drive.

AT&T prefers to perform disk partitioning on the servers, with the Customer providing any specific desired configurations. The servers must conform to a standard addressing schema. On the SCCS, Com 1 port must be assigned with Interrupt 4 and Addressing 3F8. Com 2 port must be assigned with Interrupt 3 and Address 2F8. This industry standard configuration will allows for the successful verification of the server with the Nortel PVI Checklist Utility.

Customer may load additional utilities after the servers is staged by AT&T ONLY IF Customer assumes the possible risks of billable AT&T Support intervention and re-building of the servers, should the Customer's post-staging modifications impact the performance of SCCS and SCCWC.

If modifications are made to the hardware configurations, the Customer is responsible to test and insure compliance of their actions with the Nortel applications. Prior to making any changes, the Customer should consult with Nortel documentation on what utilities are compatible with Symposium, in order to insure a successful implementation. If AT&T is engaged to resolve any issues of this nature that are initiated by the Customer, additional costs will apply.

Symposium Server Configuration
Customer must provide two IP addresses for Remote Access Service dial-in support. These IP addresses must be on the same CLAN subnet as the Server and preferably in sequence.
Customer must supply one (1) external modem for remote support (U.S. Robotics recommended).
Customer may provide an optional uninterruptible power supply for the server if desired.

Server Facilities

Customer must provide the following facilities: Space for the servers and peripherals, a dedicated AC power within 6 feet of the proposed server location with 4 or 6 receptacles within an environmentally controlled environment.

Symposium Client PC
Customer must provide a PC on the LAN running TCP/IP for testing Symposium Client application with the following minimum requirements.

Supervisor Client PC Requirements
Client PC Hardware
Intel Pentium 90 MHz (or faster) CPU
RAM
at least 32 Mbytes for windows 98
at least 64 Mbytes for Windows NT 4.0 Workstation, Windows 2000 Professional, Windows XP
Disk space
at least 2 Gbytes for Windows 2000 Professional
at least 4 Gbytes for Windows XP
1,44 Mbyte floppy drive
VGA color monitor
keyboard
Microsoft-compatible mouse
Network interface card (Ethernet)
Client PC Software
CLAN connection running Microsoft TCP/IP
4- speed or higher CD-ROM drive
(optional) parallel printer port
(optional) serial port (16550 UART)
PC's up and running with one of the following operating systems installed:
Windows 98
Windows NT 4.0 Workstation (Service Pack 5 or later
Windows 2000 Professional
Windows 2000 Professional

Note:
Windows XP is only supported on Rev. 5 of the Client Application CD.
This checklist indicates the minimum required hardware for the client. If you are generating larger ports on the client PC. A faster processor and increased memory improve performance.

Windows 98 or Windows NT 4.0. Dial-up networking and Microsoft TCP/IP installed.
Connection to the customer LAN running Microsoft TCP/IP (Ethernet LAN)
Ethernet transceiver (if required by NIC) that matches you cabling and network type

Minimum processor type 266 MHz Pentium II, 350 MHz and above recommended
Minimum memory 32 Mbytes, 64 Mbytes or higher recommended
500 Mbytes available hard drive space.
Windows 98 keyboard, Mouse, CD-ROM drive, 3.5" floppy drive, SVGA monitor, Parallel printer port, Serial
Port (16550 UART)

IP Addresses and Names

At the time of the pre-installation review, an IT representative must complete the Customer's section of
the "Symposium Site Readiness Checklist" document.

Information includes the TCP/IP Network Information for the Server, IP addresses and names for the customer
client PCs, Meridian 1 or Succession switch, Meridian Mail, or CallPilot, other equipment accessible
through the CLAN and the ELAN and user name, password, and domain name for access to CLAN if additional
client PCs are required.

Client Installation Support

A representative from the Customer's IT department must be available on the day(s) of installation to:

Support the Client Installation and resolve potential DLL conflicts.
Resolve any customer provided hardware, LAN connectivity issues, as well as any other customer readiness
issues.

Training
Symposium Call Center Release 5 Supervisor Training:
AT&T has included training for up to 0 Supervisors

Sessions will include 5 participants at a terminal or up to 10 participants in a classroom setting with a
projector and PC with Web Client software loaded. Upon completion of this hands on training session, the
student will be able to use Symposium Web Client to manage their call center resources and monitor call
center performance.

The course outline will include an introduction and description of the system. Contact center management,
which includes skillset and scheduled assignments. Real-time displays, public, private, graphical and Agent
desktop displays. Creating and scheduling historical reports.

OPTIONAL APPLICATIONS

Graphical Real Time Display Client PC with Symposium Client PCCL
Each client PC requires the following configuration:
Windows 2000 OS with Service Pack 2
Minimum processor type 266 MHz Pentium II, 300 MHz and above recommended
Minimum memory 32 Mbytes RAM available (including operating system) for Windows 95
Additional 32 Mbytes RAM virtual memory space
64 Mbytes RAM available (including operating systems) for Windows NT Workstation 4.0
500 Mbytes free hard drive space (for other third party applications)

Windows 95 keyboard, CD-ROM drive, 3.5" floppy drive, SVGA monitor, mouse, minimum 2MB video card

Ethernet (10/100 Base T) Network Interface Card
Parallel Printer port
Serial Port (16550 UART)

NOTE: Graphical Real Time Display Release 1 does not support Windows 98.

**Graphical Real Time Display Client PC with Symposium Client PC up and running on the LAN with: Windows 2000
with Service Pack 2.**
Graphical Real Time Display Release 1 does not support Window 98

Each client PC requires the following configuration:
Minimum processor type 300 MHz Pentium II, 350 MHz and above recommended
Minimum memory 64 Mbytes RAM available (including operating system) for Windows 95
Additional 48 Mbytes RAM virtual memory space
64 Mbytes RAM available (including operating systems) for Windows NT Workstation 4.0
1 Gbyte of free hard drive space (for other third party applications)

Windows 95 keyboard, CD-ROM drive, 3.5" floppy drive, SVGA monitor, mouse, minimum 2MB video card

Ethernet (10/100 Base T) Network Interface Card
Parallel Printer port
Serial Port (16550 UART)

Symposium Call Center Web Client

Server Hardware Requirements

Customer must read, understand, and take full responsibility for the latest version of the Nortel Networks Symposium Call Center Web Client Planning, Installation, and Administration Guide, for engineering guidelines, sizing of the server, and number of supported client sessions. In this document, some of the highlights deemed important are referenced, but these are not the full details or complete description of specifications.

Customer must supply one (1) license copy of PC Anywhere that is compatible with Windows OS for the Symposium Web Client Server (if deployed) as well as one (1) external modem for remote support (U.S. Robotics recommended).

Server Software Requirements

Microsoft Windows 2000 Server Service Pack 2 with Internet Information Service (IIS), Simple Mail Transfer Protocol (SMTP), Terminal Services, and Terminal Services Licensing (you require Terminal Services for the Scripting component).

Attention: Separate licenses for Terminal Services must be purchased from Microsoft for each client PC running Windows 95, 98, NT or ME that will be accessing the Script Manager portion of the Scripting component. Client PCs running on Windows 2000 do not require a separate license for Terminal Services. If the client PC is accessing Script Variables or Application Thresholds only, then a separate license is not required. A copy of Symantec PC Anywhere 9.2 must be installed in order to obtain remote support.

Microsoft Active Directory
Sybase Open Client v.12 (required for the Historical Reporting and Contact Center Management components; supplied by Nortel Networks).

When using Pentium 4 with Windows 2000 you need to use JRE 1.1.8. At the time of writing this patch can be downloaded from the Sybase web site http://my.sybase.com/detail?id=1013241. The web site also includes the instructions for installing the workaround. This solution is applicable also with Windows 2000 Operating System. For more information regarding this issue, see http://java.sun.com/products/jdk/1.1/download-jdk-windows.html.

Microsoft Internet Explorer 5.5 Service Pack 1 (or later) web browser (if the Application Server is used as both a client and server). Web Client 04.02.08.001 (SU05) does not support Internet Explorer version 6.0. Therefore, ensure Internet Explorer version 5.5 with Service pack 1 or later is installed.

One (1) license copy of PC Anywhere that is Windows 2000 compatible.

Note: To install, uninstall, and configure Symposium Web Client, you must have administrator privileges on the Application Server.

Client Hardware Requirements
The following Client requirements apply to PCs running Agent Desktop Displays.
Pentium II 300 or better
20 Mbytes available hard disk space for the Agent Desktop Displays component
A minimum of 64 Mbytes of RAM
A minimum 800 x 600 pixel resolution monitor (1024 x 768 pixel resolution is recommended for optimal display quality in the Contact Center Management component)
A serial port (if connection of the M1 Data Extraction Tool to the M1 switch using a serial port is required). Note: If you are going to connect to the M1 switch, you can use either the client PC or the Application Server as long as the system you use has a serial port.
The Pentium II 300 MHz configuration should be adequate for normal operation in small call centers (less than 50 agents). For activity that is more intensive and larger call centers, a faster processor and additional RAM, or both, improves performance. For larger call centers and higher levels of activity, the minimum platform should be scaled up accordingly.

Client Software Requirements
The following Client requirements apply to PCs running Agent Desktop Displays.
Windows 95 or 98, Windows NT Service Pack 6a or greater, Windows 2000 Professional, Windows 2000 Server, Windows XP or Windows Millennium Edition
Microsoft Internet Explorer 5.5 Service Pack 1 web browser
Excel 2000 Service Release 1a (required for the Configuration component only)

Microsoft Data Access Components (MDAC) v.2.5 (required for Windows95, Windows 98, and Windows NT4 Workstation clients; included on the Symposium Web Client installation CD and also available at www.microsoft.com). (See 9.1.3 in Known Problems and Workaround 9.1.3)

Windows Socket 2 (required for Windows 95 clients only; included on the Symposium Web Client installation CD and also available at www.microsoft.com

NOTE: Display settings on the Client PC monitor must be configured with "Small Fonts" font size to work properly. If you do not select small fonts, some items may not display correctly in the browser.

SECC Not Included

Upgrade SECC
Upgrade SECC on an existing Server

AT&T will perform software upgrade only on the existing server. No script changes are included, and no other hardware config changes will be made. The customer will contiue using the server as is.

Upgrade SECC on an new Server meeting all Nortel Specifications
AT&T will perform a software upgrade and conversion of existing database, test the new server, connect to PBX, test PBX connections, test printers and clients, check reporting capability. Load the scripts and activate the system.

Symposium Express Call Center (readiness requirements)

This Checklist ensures your company is ready for the AT&T installation of the Symposium Express System. Please return a signed copy to your AT&T representative. AT&T Project Management will work with your designated coordinator to review a pre-installation checklist.

AT&T will install the Symposium Express software and a single client of the Symposium Client unless otherwise contracted. If, at the time of AT&T installation of Symposium Express, Client, SYMON View, and/or Graphical Real Time Display applications, the Application Servers and/or Client PC configurations are incomplete or incorrect, the Customer may incur additional installation hours and associated costs

Customer Resources:
Provide the appropriate resources at the appropriate time to the AT&T Team to gather and verify system configurations.
Provide an IT resource at the appropriate time when system integration is required.
Customer Readiness:

Meridian 1 PBX Requirements
Complete all required Meridian 1 and Meridian Mail upgrades before the Express installation.

Provide any Meridian Mail or RAN ports for the Express application. Meridian Mail or RAN source is an optional resource used for delay messages. All required Meridian Mail ports are dedicated to the Express application. Traffic patterns determine the actual number of required Meridian Mail or RAN ports.

Provide Meridian 1 switch resources during implementation.

Customer LAN
Provide a functional LAN with the TCP/IP protocol installed and operating on the network.
Provide a CLAN drop, jacks and cables ready to connect the Symposium Express Server.

Customer must provide the applicable RAS IP address information necessary to ensure support from Nortel.

Customer Server

Customer must read, understand, and take full responsibility for the latest version of the Nortel Product Bulletin entitled Symposium Portfolio Server and Operating System Requirements, for minimum hardware specifications, technical recommendations and supported and non-supported configurations.

In addition, if there are any areas that seem unclear or are lacking detail, please refer to the latest version of the Nortel Networks Symposium Express Installation and Maintenance Guide.

This document contains minimum hardware and software specifications and other technical recommendations. Below are some of the highlights deemed important but these are not the full details or complete description of specifications.

Customer is responsible for insuring that server and client PCs adhere to Nortel specifications. If modifications are made to the hardware specifications or if any optional applications are resident on the server and clients, the Customer is responsible to test and insure compliance with SECC 4.2.

If AT&T is engaged to resolve server issues outside the scope of Nortel specifications, additional AT&T costs will apply.

Customer is responsible for loading the Microsoft operating system software on the server and clients for SECC 4.2, and ensuring the server is fully operational prior to making the server available for AT&T installation of the Nortel software. If AT&T is engaged to resolve operating software issues, additional AT&T costs will apply.

Customer is responsible for resolving any driver conflicts on the server. If AT&T is engaged to resolve driver conflicts, additional AT&T costs will apply.

Express PC Client - Hardware and Software Requirements
PC (separate from Express server) up and running with maximum of 8 Supervisors configured.
Client PCs using Novell must have Client for Microsoft Networks installed

Client PCs running Express with Call Pilot, MAT, and/or Call Center Server requires Partition Magic

Client PCs must have any report writer installed prior to the Express software

Each Client PC should have the following minimum configuration:
Minimum Processor Type: 166 MHz Pentium II. 350 MHz and above recommended
Minimum RAM Memory:
64 Mbytes for Win NT, Win 2000, & Win XP
Minimum Hard Drive:

1 Gbytes for Win NT for C: partition formatted with the FAT File System, 200 Mbytes minimum paging file

Gbytes for Win 2000 and Win XP with minimum 500 MB of free space
Windows keyboard
Mouse
SVGA monitor (1024x768 display setting)
CD-ROM drive (4x speed minimum)
3.5" floppy drive
Network Card for CLAN connection (running Microsoft TCP/IP)

Express Client supports the following operating systems:
Windows NT Server or Workstation 4.0 (Service Pack 6a)

Windows 2000 Professional (Service Pack 2 and Microsoft TCP/IP protocol installed and configured)

Windows XP

Customer must read, understand and take full responsibility for the Hardware and Software Checklist for Client PCs with Windows 2000 section of the Nortel Customer Supplied Equipment and Data Requirements located in the latest version of the Nortel Networks Symposium Express Call Center Release 4.2 Planning, Installation and Administration Guide.

  This document contains minimum hardware and software specifications and other technical recommendations.

IP Addresses and Names

An IT representative must provide information including the IP addresses and names for the customer client PCs, the server, the Meridian 1 switch, Meridian Mail, and other equipment accessible through the CLAN an the ELAN. User name, password, and Domain name for access to CLAN if additional client PCs are required.

3 static IP addresses for the Windows 2000 Server.
WINDOWS 2000 Server cannot belong to a domain.
Meridian 1 LAN and the Customer LAN must be in separate subnets

Express Installation Support

A representative from the Customer's IT department must be available on the day(s) of installation to:

Support the Server and Client installations and resolve potential DLL conflicts.
Resolve any customer provided hardware, LAN connectivity issues, as well as any other customer readiness issues.

Express On-Going Support
Execute documented maintenance procedures including system back-ups (partial & full) to capture system configurations.

Optional Graphical Real Time Display Client PC without Express Client

Each client PC requires the following configuration:

Minimum processor type 266 MHz Pentium II, 300 MHz and above recommended.

Additional 32 Mbytes RAM virtual memory space

64 Mbytes RAM available (including operating systems) for Windows NT Workstation 4.0

500 Mbytes free hard drive space (for other third party applications)

Windows keyboard, CD-ROM drive, 3.5" floppy drive, SVGA monitor, mouse, minimum 2MB video card

Ethernet (10/100 Base T) Network Interface Card

Parallel Printer port

Serial Port (16550 UART)

Optional Graphical Real Time Display Client PC with Express Client

Each client PC requires the following configuration:

Minimum processor type 300 MHz Pentium II, 350 MHz and above recommended.

Additional 48 Mbytes RAM virtual memory space

64 Mbytes RAM available (including operating systems) for Windows NT Workstation 4.0

1 Gbytes free hard drive space (for other third party applications)

Windows keyboard, CD-ROM drive, 3.5" floppy drive, SVGA monitor, mouse, minimum 2MB video card

Ethernet (10/100 Base T) Network Interface Card

Parallel Printer port

Serial Port (16550 UART)

Optional SYMON View PC Server Rel.3

PC or Server SEPARATE from the Express Call Center Server must be up and running on the LAN with: Windows 2000 or Windows NT 4.0 Server with Service Pack 6.1A. Can be an WINDOWS NT 4.0 workstation or another server on the network with spare capacity

Minimum Processor Type 400 MHz Pentium II 450 MHz and above recommended (a larger processor may not be required as the number of SYMON View desktop clients are added)

Minimum Memory 64Mbytes, 128 Mbytes or higher recommended

Minimum 32 Mbytes free hard disk space

Windows keyboard, Mouse, CD-ROM drive, 3.5" floppy drive, SVGA or higher resolution monitor

One or more network adapter cards (Ethernet 3COM models recommended)

A static IP address

Optional SYMON View Client PC

PC up and running on the LAN with: Windows 98, or Windows NT 4.0 Workstation with Service Pack 6.1A.

Each client PC requires:

Minimum processor type 266 MHz Pentium II, 300 MHz and above recommended.

Minimum memory 32 Mbytes, 64Mbytes or higher recommended

20 Mbytes free hard drive space

Windows keyboard, Mouse, CD-ROM drive, 3.5" floppy drive, SVGA or higher resolution monitor

One or more network adapter cards (Ethernet 3COM recommended]

Symonview Not Included

Caller ID Routing Not Included

0 ACD Agents

0 ACD Supervisors

0 ACD Queues Included

Call Center Helpdesk Support Service for Symposium Call Centers.

Support Organization

The DataComm Customer Service Center (DCSC) acts as the single point of contact for customer maintenance and repair services and monitors customer owned communication systems. The DCSC also provides third tier technical support to field Services and manages escalation to manufacturer support organizations.

The Call Center Help Desk operates Monday through Friday, 8:00 - 5:00 CST and provides complete coverage for trouble resolution 24 hours, 7 days a week. An event can be a trouble call, a Help Desk Inquiry, and "Move Add Change (MAC)" order or a System Administrative Request. The event reporting process includes call-answer, event clarification and recording, problem coordination and resolution, vendor coordination, customer status, ticket updating, remote trouble resolution, where appropriate, order completion, and ticket closure.

The Call Center Help Desk is partitioned into tiers to assure complete and timely resolution to any problem. The Tier-1 and 2 levels of support take the initial problem information from the caller and create a trouble ticket. The first tier verifies that a contract is in place, and begins the escalation process.

A level of "triage" is applied to the trouble ticket, and basic administration level problems are resolved immediately while more complex issues are immediately "escalated" to the next level of support. As status is returned on the trouble ticket, the database is updated, and the customer kept in the loop as to the status. This is called the "Closed-loop Process".

Problems that are more complex cause the problem ticket to move to Tier-3 level of support. At this level, the support organization enlists engineers and application developers, who though not the developers of the Nortel software, are familiar with the network, platforms, and software used at the call center. The resolution time is estimated, the caller is notified, and problem fixing is begun.

If the problem is determined to lie with the Symposium Call Center Server Software, the problem can be referred to the next level of support, which is Nortel Networks. The Call Center Help Desk manages Nortel Networks to fix the problem. From the customer point of view, there is no transfer of responsibility. ATT is responsible for fixing the problem.

Note, that if the problem is determined to be in the customer's own network, or customer provided equipment such as the server, or dispatch is required, then the customer will be billed for the "out-of-scope" services.

The DCSC deploys the following attributes:
Single Point of Contact
Personalized Call-Answer
Application Assistance
System Administration
Application Administration
Problem Isolation
Problem Resolution
Customer Status
Ticketing Updating
Ticket Closure
Remote Diagnostics
Vendor Management
Problem Escalation

Description of Services
The DCSC provides the following services:
Help Desk Service

Call Center Help Desk personnel will receive the customer call and answer most application questions. They will enter a ticket into our system for the purpose of tracking and documentation.

The Help Desk Specialist will have at their disposal a team of Call Center Administration and Application Specialists on which to refer questions that are more complex than the Help Desk Specialist can handle so that the customers will always get an answer. Since some Help Desk questions are actually troubles in their early stages, the Help Desk Specialist will be able to smoothly transition any trouble to the appropriate personnel who also resides within the same group of Call Center Help Desk personnel.

Maintenance

Trouble calls will be taken within the call center help desk in much the same manner as defined in the Help Desk Service Section. Upon entry into the trouble ticket system, severity identification, and appropriate resolution activity will begin. Help Desk agents will ask the customers a series of troubleshooting questions designed to isolate and/or repair the given case of trouble.

A Call Center Administrative or Application Specialist will own the trouble and be responsible for resolution throughout the life of the issue. All parties required to quickly solve the problem will be managed by the Call Center Help Desk Personnel. Escalation and updating status of the ticket will be the responsibility of the Help Desk resulting in timely, seamless resolution.

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Status

The Call Center Help Desk shall initiate immediate trouble resolution efforts upon receipt of a Customer trouble report. AT&T shall document, track, and report periodically, as agreed upon initiation of a trouble ticket and other problems on the Call Center system.

AT&T shall provide the Customer a status update for a High-Level Severity ticket, as requested by the Customer.

Restoral

AT&T shall perform trouble resolution efforts as required to repair or replace a malfunctioning component of the system or to restore service interruptions to an operating condition consistent with the manufacturer's specifications.

Trouble resolution requiring a dispatch shall be performed during the Principal Period of Maintenance (PPM), which is defined as Monday through Friday from 8:00 a.m. to 5:00 p.m. CST, excluding holidays. If non-critical dispatch is requested, outside of the PPM, the work shall be billed at the rates described in the main agreement.

Resolution

AT&T is responsible for and shall provide event resolution support to include, by way of example, technical telephone consultation and diagnostic assistance to determine origination, to expedite restoration of Major Outages and to coordinate fault isolation with other suppliers, manufacturers and/or the customer.

Maintenance Severity Levels

Trouble severity and assignment of severity levels will be determined by the following severity definitions. A "system" is one of the components that make up the call center, such as the Symposium Call Center Server. Upon initiating a trouble ticket, the customer and Help Desk will determine the level of ticket severity based upon the following guidelines. Exceptions to these guidelines will be made when appropriate.

Service Level 1

Application is inoperative, inability to use application materially impacts customer operations.

Service Level 2

Application is usable with limited functions. Error condition is not critical to continuing operation. Customer or AT&T has determined the method of workaround for the error condition.

Service Level 3

Application is usable, but a minor problem exits.

Escalation

First Level: Help Desk

Phone: (888) 281-9723

Second Level: Manager – Call Center Help Desk

Third Level: Director – Customer Care Operations

Fourth Level: Regional VP Customer Care Operations

Dialing Plan Information

No NARS
No ESN Programming Included
BARS (Basic Automatic Route Selection)
No CDP
1 Sites

Back-up Power

Back-up Power has not been provisioned for this project.
AT&T will provide a backup power system protection for this poject

Based upon the calculated load of the provisioned equipment, the back-up power system AT&T has included will provide up to 2 hours of back-up power. This time will vary depending upon enviromental conditions, frequency of power outages, and if any equipment outside this proposal is connected to the back-up power system.

Additional Applications

System Administration Tools

OTM (Optivity Telephony Manager) has been included in the proposal.

OTM/MAT Station Administration
OTM/MAT Traffic Analysis
OTM Call Accounting/Telecom Billing will be installed
No MDR
This Scope of Work includes Avotus Services, please see attached scope of work

OTM Upgrades
AT&T will perform a Keycode upgrade of the customers existing OTM software. This includes backing up the
system on the customers media on the existing platform.

AT&T will perform an upgrade to the customers existing OTM software release 1.0 system to relase 2.X. No
other changes are included.

AT&T will perform an upgrade to the customers existing OTM software release 2.X system to relase 2.X. No
other changes are included.

Introduction

This checklist ensures your company is ready for the AT&T installation of the Optivity Telephony Manager
product (OTM). AT&T will work with your designated coordinator to review a pre-installation checklist.
AT&T will install the Optivity Telephony Manager software (with the involvement of the third-party
professional service providers "if required") on a single standalone PC unless otherwise contracted. If
at the time of AT&T Installation of the Optivity Telephony Manager applications, the Windows 2000 Server
and/or Client PC configurations are incomplete or incorrect, you may incur additional installation hours
and associated costs.

Customer Resources
Customer shall provide the appropriate resources at the appropriate time to the AT&T Team to
gather/verify system configurations.
Customer shall provide an IT resource at the appropriate time when integrating the Server on the LAN,
loading Client applications, and/or any other time system integration is required.

Pre-Implementation Tasks and Responsibilities of Distributor and/or Customer

This list is an outline of the Pre-Implementation tasks that need to be completed to allow a professional
installation, configuration, and instruction on the Optivity Telephony Manager Software. The tasks listed
are those associated with a "typical" installation, who is normally responsible for them, and which
Milestone addresses them.

The list is extensive but may not be all-inclusive, so a certain amount of interpolation might be
necessary. Note that even though specific responsibilities are assigned, consultation with other "Members
of the Team" is expected and, in some cases, required. Note that the items on this list are associated
only with preparing the PBX, the PC(s), and the serial, modem, and/or Ethernet connections between them.

AT&T Responsibilities
AT&T shall order the OTM software from Nortel and deliver it to the installation site.
AT&T shall order current Rates & Tariffs Tables for TBS (Call Accounting).
AT&T will install the Call Account\Telecom Billing module.
AT&T and Customer shall determine the desired method(s) of connecting the OTM Server(s) and Client(s), or
Stand-alone PC to the PBX(s) and buffers.
AT&T shall ensure that each PBX is appropriately equipped, hardware- and software-wise, for the desired
applications and connectivity.
AT&T shall ensure that the people who will receive instruction already have the prerequisite knowledge,
or are scheduled to acquire it prior to OTM installation.
AT&T shall program the appropriate loads in the PBX and coordinate with the Customer's network
administrator as necessary for Ethernet connectivity.
AT&T shall configure the SDI ports appropriately, and install necessary buffers, modems, and cabling for
serial connectivity.
AT&T and Customer shall install and configure appropriate PC Anywhere software, and assist Third-Party
Professional Service provider in using this tool to confirm that all pre-installation requirements have
been met, and that the planned connectivity functions.

Customer Responsibilities
Customer shall configure desired users in Windows 2000 domains and LDAP server for ENHANCED and PREMIUM
packages.

·Customer shall plan and provide the necessary informational links for the PREMIUM package's LDAP synchronization.

Customer shall provide the OTM Server and/or Client(s) or Stand-alone PC as per the minimum hardware requirements, with a supported release of Microsoft Windows, and all required Windows modules and additional non-OTM software installed.

Customer shall provide the necessary transducers, hub, router, and cabling to connect between the PBX and the network or PC NIC for Ethernet connectivity.

Customer shall program the appropriate loads in the PBX and coordinate with the Customer's network administrator as necessary for Ethernet connectivity.

Customer shall supply and maintain current antivirus protection for all servers and PC clients.

Implementation Tasks and Responsibilities of AT&T or 3rd-Party Professional Service Provider

This list is an outline of the tasks that AT&T and/or 3rd-Party Professional Service Provider (PSP) will perform associated with the Implementation of the Optivity Telephony Manager Software.

The tasks listed are those associated with an installation -- as applicable. The Milestone associated with each is listed. The list is extensive but may not be all-inclusive, so a certain amount of interpolation might be necessary. Note that even though these specific responsibilities are those of AT&T and/or 3rd-Party Professional Service Provider, cooperation with other "Members of the Team" is expected and, in some cases, required.

Note that the items on this list are associated only with:
• Pre-installation testing of the PBX, PCs, and connectivity (the "infrastructure") to determine if the site is ready for an OTM Implementation.
• Installing, configuring, and testing the OTM Software.
• Providing appropriate instruction and post-installation.

AT&T and Third Party Responsibilities
AT&T or 3rd Party PSP will for TBS, check that correct Rates & Tariffs tables have been ordered and will be available at the time of installation.

AT&T or 3rd Party PSP will remotely assist with the installation and testing of the PC Anywhere software.

AT&T or 3rd Party PSP will remotely run the OTM Software loader to confirm that all required Windows O/S elements are present and functional and that the software will load without error.

AT&T or 3rd Party PSP will remotely test any serial connectivity, buffers, and/or pass-through devices. Program serial buffers as required, and confirm that data is flowing and being stored correctly.

AT&T or 3rd Party PSP will remotely test any Ethernet connectivity, including DBA, and confirm that 18 Remotely test any Ethernet connectivity, including DBA, and confirm that data is flowing and being stored correctly.

AT&T or 3rd Party PSP onsite will complete the OTM Software installation on-site. Test and confirm all functions and capabilities.

AT&T or 3rd Party PSP onsite will configure the software, site by site. Perform the necessary, multiple synchronization's between the PBX(s) and the software databases, and confirm their proper operation.

AT&T or 3rd Party PSP onsite will perform manual CDR and/or Traffic data collections and run reports to confirm that the data and site configurations are as per the customer's needs and requirements.

AT&T or 3rd Party PSP onsite will test and confirm the ability to print reports, to the standard output devices, from all licensed modules.

AT&T or 3rd Party PSP onsite will install and configure the OTM Software on all licensed Clients.

AT&T or 3rd Party PSP onsite will work with the customer's IS department to setup and configure an administrative web user, and verify the operation of the Web Applications.

AT&T or 3rd Party PSP onsite will work with the customer's IS department to setup and configure communications between OTM and another LDAP-compliant database.

AT&T or 3rd Party PSP onsite will provide from 1 to 3 1/2 days of detailed end-user instruction, with student guides that include step-by-step procedures and FAQ's.

Customer Readiness LAN
The OTM Server, or stand-alone PC, can be connected to the Meridian PBX via Ethernet. That connection can be: Direct, between the Server or Stand-alone PC and the PBX, using a cross-over cable or hub, or Indirect, using a standard, customer-premise LAN or WAN.
• Provide a functional LAN with the TCP/IP protocol installed and operating on the network.
• Provide a CLAN drop, jacks and cables ready to connect the Optivity Telephony Manager

Customer Provided Server/PC Requirements
- OTM software is either located on a Server or can reside on a Stand-Alone PC.
- Customer is responsible for resolving driver conflicts on servers other than the recommended platforms and those not standard with Windows 2000. If AT&T is engaged to resolve driver conflicts, additional costs will apply.
- AT&T required Minimum hardware configuration for OTM Server. AT&T does not endorse the use of any published minimum specifications:

    - All hardware devices must be on the Microsoft's Hardware Compatibility List for Windows 2000. See the list of compatible hardware devices on website: http://www.microsoft.com/isapi/hwtest/hcl.idc.

    - Intel based CPU – Pentium III 400Mhz (600Mhz Recommended). (Note: Quad CPU and Pentium4 are not currently supported),(Pentium III 600Mhz if using TBS-Telecom Billing Services).

    - RAM –512MB.
    - Hard Drive Space – 2GB (1 GB plus customer data storage).
    - SVGA Color Monitor – 800 x 600or higher Resolution.
    - 3 ½-inch 1.44 MB floppy disk drive – Required.
    - CD-ROM drive – Required.
    - Ethernet Network Interface Card – 1 or 2 (Ethernet Network Interface Card is required to support connection with the Nortel Networks PBX via Ethernet. A second Ethernet Network Interface Card is optional depending on configuration).

    - Hayes-compatible modem – 56K BPS (Optional for connection to remote sites, required for polling configurations. Please note: "WinModems" are incompatible and therefore are not supported).

    - PC Anywhere 11.0, "Timbuktu Pro 7.0."
    - An analog line for remote communication.
    - PC COM port with 16550 UART – Required.
    - Parallel printer port (configured) or USB port (required for security dongle)–Required.

- Operating System requirements for OTM Server. The customer is responsible for loading the operating system software and ensuring it is fully operational prior to providing the server to AT&T for implementation of the Nortel software. English OTM Configurations are supported on the following operating systems:
    - Windows 2000 Server + Windows 2000 Professional client
    - Windows 2000 Server + Windows XP Professional client
    - Windows 2000 Server Standalone
    - Windows 2000 Professional Standalone

OTM 2.2 is not supported on Windows 2000 Advanced Server or Datacenter Server or Windows 2003 Server.

Windows XP SP2 Configuration and Restrictions.

With Microsoft Windows XP Service Pack 2 (SP2), enhanced security settings are introduced. This includes enabling ICF (Internet Connection Firewall) by default and limiting default privileges in Internet Explorer. Configure Windows XP SP2 to work with OTM.

1. Open Control Panel, Internet Connection Firewall . Choose one of the following options:
    a. Select General Tab, then set Internet Connection Firewall to "Off" Mode.

    b. Select Exceptions, then select only those applications that you want network access enabled.

To enable web applications from the Internet Explorer menu bar, select View, Manage Add-Ons, then select Add-ons that have used by Internet Explorer and enable all.

From the Internet Explorer menu bar, select Tools, Pop-Up Manager, then enable Pop-Up Windows.

From the Internet Explorer menu bar, Tools, Internet Options, Security, Trusted Sites, click Sites, then add server IP address to trusted site.

Service pack support is required for the following Operating Systems:

Operating System Service Pack Required:
    - Windows 2000 Server Service Pack 4
    - Windows 2000 Professional Service Pack 4
    - Windows XP Professional Service Pack 2
- AT&T required Minimum hardware configuration for OTM Stand-Alone PC. AT&T does not endorse the use of any published minimum specifications:

- All hardware devices must be on the Microsoft's Hardware Compatibility List for Windows 2000. See the list of compatible hardware devices on ebsite:http://www.microsoft.com/isapi/hwtest/hcl.idc.

- Intel based CPU – Pentium II 400Mhz (600Mhz Recommended). (600 Mhz if using TBS-Telecom Billing Services).
- RAM –512MB.
- Hard Drive Space – 500MB.
- SVGA Color Monitor – 800 x 600or higher Resolution.
- 3 ½-inch 1.44 MB floppy disk drive – Required.
- CD-ROM drive – Required.
- Ethernet Network Interface Card – 1.

- Hayes-compatible modem – 56K BPS (Optional for connection to remote sites, required for polling configurations. Please note: "WinModems" are incompatible and therefore are not supported).

- PC Anywhere 11.0, "Timbuktu Pro 7.0."
- An analog line for remote communication.
- PC COM port with 16550 UART – Required.
- Parallel printer port (configured) or USB port (required for security dongle) – Required.

- Operating System Requirements for OTM Stand-Alone PC:

  - The customer is responsible for loading the operating system software and ensuring it is fully operational prior to providing the server to AT&T for implementation of the Nortel software.

  - English OTM Configurations are supported on the following operating systems:
    - Windows 2000 professional standalone.
    - Windows 2000 server and XP Professional are also supported without clients attached.
    - OTM is not able to be installed on Windows 95, 98, ME or NT Workstation.
    - OTM 2.2 is not supported on Windows 2003 Server.
  Service pack support is required for the following Operating Systems: Operating System Service Pack Required:
    - Windows 2000 Server Service Pack 4.
    - Windows 2000 Professional Service Pack 4.
    - Windows XP Professional Service Pack 2.
    - Any new Microsoft Windows 2000 server Service Pack releases will be subject to Nortel Networks Technology testing and approval.

  - For customer provided PCs, the PC vendor will be responsible for supplying the operating system.

  - The operating system must be installed on partition C:

OTM Server Configuration

- Provide two IP addresses for Remote Access Service dial in support. These IP addresses must be on the same CLAN subnet as the Server and preferably in sequence.

- Two (1) license copies of PC Anywhere that are Windows 2000 compatible.
- Provide optional customer-supplied uninterruptible power supply for the server.
  Server/PC Facilities

- Provide the following facilities: Space for the server/PC and peripherals, a dedicated AC power within 6 feet of the proposed server location with 4 or 6 receptacles in an environmentally controlled environment.

OTM Client PC
- During the installation, provide a PC up on the LAN running TCP/IP for testing the client with the minimum requirements identified below:
Each Supervisor Client PC requires as specified by Nortel:
- Windows 2000 Professional(SP4) or Windows XP Professional(SP2). Dial-up networking and Microsoft TCP/IP installed.
- Connection to the customer LAN running Microsoft TCP/IP (Ethernet LAN).
- Ethernet transceiver (if required by NIC) that matches you cabling and network type.
- Minimum processor type 400 MHz Pentium III (600 MHz Recommended). AT&T does not endorse the use of any published minimum specifications.
- Minimum memory 256 MB (512MB Recommended). AT&T does not endorse the use of any published minimum specifications.
- 500 Mbytes minimum available hard drive free space.
- Windows 98 keyboard, Mouse, CD-ROM drive, 3.5" floppy drive, SVGA monitor (800 X 600 or higher Resolution), Parallel printer port, Serial Port (16550 UART).

- Hayes-compatible modem – 56K BPS (Optional for connection to remote sites, required for polling configurations. Please note: "WinModems" are incompatible and therefore are not supported.)

- PC Anywhere 11.0, "Timbuktu Pro 7.0."
- An analog line for remote communication.
- A printer must be configured, but not required to be attached to the PC.

One Client Per Customer requires the above plus IP Addresses and Names. At the time of the pre-installation review, an IT representative must complete the customer's portion of the "Implementation Worksheets." Information includes the TCP/IP Network Information for the Server, IP addresses and names for the customer client PCs, the Meridian 1 switch, Meridian Mail, and other equipment accessible through the CLAN and the ELAN. User name, password, and Domain name for access to CLAN if additional client PCs are required.

Client Installation Support

A representative from the Customer's IT department must be available on the day(s) of installation to:

- Support the Client Installation and resolve potential DLL conflicts.
- Resolve any customer provided hardware, LAN connectivity issues, as well as any other customer pre-implementation issues.
- AT&T/Nortel Networks is not responsible for customer software conflicts. In the event of communication errors, a client PC with the recommended software requirement will be needed to verify LAN access to the server.

OTM WEB Server & WEB Browser Support
Web Server Support
To access OTM web applications, IIS is required to be running on the OTM server. The versions of IIS supported on the OS platforms are:
- Windows 2000: IIS 5.0
- Windows XP Professional: IIS 5.1
Web Browser Support
- Internet Explorer 6.0 with SP 1 running on Windows 2000 Professional or XP Professional.
- IE 6.0 as a web client from Windows 2000 Server (In server or standalone mode).
Netscape Communicator 4.79 is no longer a supported web browser in OTM 2.2. However, it is still required on the OTM server/standalone to retrieve the certificate needed for configurations requiring LDAP SSL connection.
NOTE: It is not recommended to run more than one web client from Windows 2000 Professional or Windows XP Professional standalone platforms.

Other Considerations of OTM Platform

Because other applications may interfere with the OTM installation and operation, Nortel requires that the OTM Server or Client/PC which communicates with the Meridian PBX(s) for data collection and transmission purposes be dedicated to OTM Tasks. This PC should NOT have other programs residing on it that use any COM port (except PC Anywhere, as noted below), provide desktop management, or run any other program's scheduled events. This includes other Nortel software – see Co Residence Recommendations.

NOTE ALSO that, as there was an ODBC conflict between OTM and Microsoft Office 2000, we expect there will continue to be one with Office XP. And Nortel has not mentioned Windows XP as a client O/S anywhere, yet. It is highly recommended that PC Anywhere 32 Host remote access software be present on the OTM Server and/or Client/PC. AT&T and/or 3rd Party Professional Service Providers uses this remote access to verify the pre-installation readiness of the system, and for post-installation support.

The PC Anywhere connection of choice is direct-dial-in modem. Any other method of PC Anywhere connectivity must be transparent to our efforts – we want to spend our time working with your OTM system, not fighting firewalls or other connectivity issues.

It is expected (and recommended) that only the Operating System will reside on the "C" partition of the OTM Server hard drive. OTM itself, programs and data, should be installed on the largest non-O/S partition available. Special Installation Notes for OTM Server System administrators:

- Do not install any other operating system (e.g. DOS, Windows 95, or Linux) on the server.
- Install the computer as a server. Do not install it as a primary domain controller (PDC).
- ALL partitions MUST be formatted as NTFS prior to starting the OTM installation.
- Do NOT perform a Copy Install, or ghosting, which installs Windows NT/2000 by copying the entire root directory, and several other files, from one hard drive to another Nortel does not support this kind of installation.

Co-residency Support

Do not install the OTM Server co-resident with any other applications unless it is supported — this includes both Nortel and non-Nortel applications. Supported co-resident applications include:

Operating System: XP Pro with IE 6 English, Excel 2000/2002, Word 2000/2002 on OTM client or standalone

Other Co-resident Application:
*   PC Anywhere 11.0, "Timbuktu Pro 7.0"
*   Norton Antivirus Corporate Edition 8.0
*   McAffee VirusScan 8.0
*   NetIQ Agent

Operating System: 2000 Pro with IE 6 English, Excel 2000/2002, Word 2000/2002 on OTM client or standalone.

Other Co-resident Application:
*   ONMS 10.1/ONMS 10.2 client
*   CallPilot 2.5/3.0 Application Builder
*   SCCS 4.2/5.0 System Management Interface (SMI) Workbench (English)
*   SECC 4.2 SMI Workbench (English), Symposium Web Center Portal Administrator client 4.0
*   Symposium Agent 2.3
*   Remote Office 1.5/1.4 Configuration Manager
*   NetVision Administrator 4.0
*   PC Anywhere 11.0, "Timbuktu Pro 7.0"
*   Norton Antivirus Corporate Edition
*   McAffee VirusScan
*   NetIQ Agent

Operating System: 2000 Server with IE 6 English, Excel 2000/2002, Word 2000/2002 on OTM server installation.

Other Co-resident Application:
*   PC Anywhere 11.0, "Timbuktu Pro 7.0"
*   Norton Antivirus Corporate Edition
*   McAffee VirusScan Enterprise
*   NetIQ Agent

Engineering Considerations

Physical Memory

The amount of physical memory installed on the server is critical in achieving maximum performance on the PC. Microsoft Windows systems have a feature called Virtual Memory.

Virtual Memory allows the PC to continue running programs that require more memory than there is physical memory available. It borrows memory using a memory-swapping scheme from available space on the main hard disk.

Although this feature permits the PC to perform operations without worrying about running out of physical memory and, thus, crashing the computer, it sacrifices performance of these operations by requiring access of the hard disk while memory swapping. This degrades performance because:

*   Physical memory access is much faster than disk access.
*   Accessing the disk while memory swapping steals disk resources away from applications that need to read and write to the hard disk.

The OTM server software and the Windows server software require approximately 900 MB without active features. The minimum server memory is 512 MB. The amount of memory does not grow significantly as features are running and windows are opened. The one exception to this is OTM client access. Each OTM client connection to the OTM server requires an additional 3 MB of memory. For large configurations, such as 100 systems and 50 OTM clients, an additional 150 MB of memory is required.

Disk performance

Much of the time spent by OTM Features is in reading and writing data to the hard disk.

Features that spend a significant percentage of their time accessing the disk are called disk-intensive applications. For these features, the access time is critical in terms of the time it takes for a feature to complete an operation. OTM disk-intensive applications analyzed in this document include:

*   CDR and traffic collection.
*   TBS report generation.
*   Simultaneous Update of Station Data.

Station Update from a single system is not affected by disk performance, as the speed of transmission from the system is slower
than the PC accessing its disk.

- Web/OTM client station Access.

"Physical memory" recommends a hard disk using the ATAPI interface. It also recommends a single hard disk.

To improve performance you can:

- Use the fastest Ultra-Wide SCSI Interface (15K RPM).

Disk performance increases by a factor of 2 or better. This can translate to an increase in feature performance (reduce elapsed time and increase simultaneous operations) by 50 percent or better. SCSI disk drives come in various speeds.

- Add a hard disk to store OTM Data separate from the OS and Programs.

If the server PC being used is using an ATAPI interface for its main disk, C:, then installing a SCSI interface card and second hard disk to store OTM Data can achieve the majority of the SCSI performance increase.

Processor Speed

The 600 MHZ CPU recommended is sufficient for the maximum configurations presented here.

An increase in CPU power does not, by itself, greatly increase the capacity of the server. The PC is so I/O bound, from accessing memory to accessing the hard disk, that a two-fold increase in CPU power may result in only a 10 percent increase in OTM capacity.

Replacement of the motherboard, not just the CPU chip, can further increase CPU performance, since the newer motherboard is designed to take advantage of the high processor speeds (for example, faster CPU bus, faster memory, and so on).

The PC is still heavily bound to disk access and network speeds. Windows XP systems may perform slightly slower than Windows 2000 systems of a similar hardware and software configuration due to the nature of the Operating System.

Note: OTM concurrence follows the life cycle plans of the Meridian 1 and Succession systems and components it interworks with. Some CPU/X11 release/system configurations that have reached their "end of life" cycle and thus are not supported by Nortel Networks, are also not supported by OTM.

Hard Drive Requirements

The OTM server software and the Windows server software requires approximately 900 MB without OTM data or active features. You must reserve approximately 300 MB of disk space for virtual memory and normal OS operations.

CDR = 250 bytes per record, at peak rates over a one-day period, this creates a 700 MB file.

Station = approximately 500 kb per 100 telephones.
Disk space = 500 kb/100 telephones*10,000 lines = 50 MB of disk space.
Directory = approximately 80 kb per 100 records.
Disk space = 80 KB/100 telephones * 10,000 lines = 8 MB of disk space.

Implementation Worksheets

The following pages are to be completed by the AT&T Project Manager, Customer and 3rd party vendor, if applicable as part of the implementation process.

AT&T Verification Policy

It is the customer's responsibility to ensure that all hardware, software, wiring, and facilities are fully prepared and ready for AT&T software installation and/or implementation, per the project timeline.

The Customer is responsible for the purchase of additional services to complete the project, if the

Connectivity Needs of the Enhanced Package

There are three types of OTM users. OTM Administrators, OTM technicians and Desktop users. OTM

Connectivity needs of LDAP

In order to configure the LDAP synchronization, OTM must know the address of the LDAP server, the server

LDAP and Active Directory Servers supported by OTM 2.2:

- Netscape Directory 4.1
- Sun ONE Directory 5.0 and 5.2
- Exchange Server 5.5 and Exchange Server for Windows 2000 and 2003
- Novell NDS 6.0 and eDirectory 8.7
- Active Directory for Windows 2000 and 2003

Voice Mail Section

Voice mail has not been quoted on this project.

Meridian Mail

No Meridian Mail

0 Mailboxes

0 Total Ports

0 Total Storage Hours
No Fax on Demand
Auto Attendant Programming Not Included
No Voice Menus Included
Meridian Mail Reporter Not Included
Voice Mail Networking Not Included
No Sites For Voice Mail Networking Included

Nortel Call Pilot
CallPilot
CallPilot Platform IPE
120 Mailboxes
8 Total Ports
350 Total Storage Hours
Auto Attendant Programming Included
2 Voice Menus Included
No Fax Application Included
Desktop Messaging Users Not Included
Fax Messaging users are not included.
CallPilot Reporter Setup Not Included
My CallPilot Setup Not Included
Setup of CallPilot Manager on external web server Not Included
Voice Mail Networking Not Included
No Sites For Voice Mail Networking Included
CallPilot Upgrade
Meridian Mail Migration to CallPilot

CallPilot Requirements

CallPilot is a unified messaging system that offers a single solution for managing many types of information, including voice, fax, and e-mail messages, telephone calls, calendars, directories and call logs.

General

The CallPilot is available in a 1002rp rack mount, 703t tower or 201i IPE card platform. The CallPilot 1002rp rack-mount or 703t tower server must be located within 10 m (30 ft.) of the Nortel phone system (Meridian 1 or CS1000). The limitation is the DS30X cable that connects the CallPilot to the switch, which is 30ft., so the actual location may need to be closer. The 201i IPE card is not affected by this requirement.

Required IP Addresses
Required Addresses   Value (examples only)
Primary IP address (CLAN)   47.1.1.10
Secondary IP address (ELAN)   47.1.1.11
Subnet mask (CLAN)   255.255.255.0 (must be unique on the network)
Default gateway IP address (CLAN)   47.1.1.1 (must be unique on the network)
Network IP address (CLAN)   0.0.0.0 (must be unique on the network)

The Customer must provide 2 IP addresses for Remote Access Services (RAS.) (For dial-in support, these IP addresses MUST be on the SAME CLAN subnet as the Server and preferably in sequence.)

First RAS IP Address
Second RAS IP Address

Required Customer SuppliedAntivirus software (AT&T does not provide anti-virus software)
The antivirus software application currently authorized and required for installation on the CallPilot server is Symantec Norton Anti-Virus 9.0 (corporate edition).

Third-party software & hardware

The installation of any non-authorized third-party software or hardware can destabilize the system and degrade its capacity of providing real-time call processing performance. AT&T will not support a CallPilot system with non-authorized third-party software or hardware.

CallPilot Web Services Requirements
CallPilot has 3 web applications:
CallPilot Manager – Provides management of the CallPilot.
My CallPilot – A web based portal that provides access to CallPilot messages and mailbox configuration over the Internet. (A Desktop Messaging user license is required.)

Call Pilot Reporter converts raw statistics from your server into easy-to-read reports.
CallPilot Manager, My CallPilot, and CallPilot Reporter are web-based applications that require a web server.

If you use CallPilot Manager or My CallPilot, or both, then the CallPilot server can be used as the web server.

AT&T recommends using an external server for any My CallPilot applications that use web messaging.

CallPilot can also use an optional, external Internet Information Server (IIS) to provide management and end-user web services. A separate external web server is required for CallPilot Reporter.

If desired, all three applications can reside on an external IIS server.
Setup of My CallPilot has not been included in this project.
Setup of CallPilot Reporter has not been included in this project.

Setup of CallPilot Manager on an external web server has not been included in this project.

My CallPilot considerations
My CallPilot is an application used for end user mailbox administration via a web browser.
My CallPilot can be setup on the standalone administration server or the CallPilot server.
AT&T strongly recommends the standalone administration server. Use the client specs for My CallPilot Web Messaging below for the clients that can be used with My CallPilot.

My CallPilot Web Messaging Client PC Requirements
• Sound card (required) and microphone (optional).
• Ethernet LAN connection to CallPilot server or My CallPilot web server.
• Browser Compatibility: Netscape 6.2x, 7.0, 7.1, 7.2; Internet Explorer 5.x, 6.0.
• Browsers NOT supported: Netscape 4.0x, 4.5, 4.6, 4.7x; Internet Explorer 4.x.
• **Operating System Compatibility:**
  Windows 98
  98SE
  ME
  NT 4.0 (SP1)
  NT 4.0 (SP4)
  NT 4.0 (SP5)
  NT 4.0 (SP6)
  NT Server
  2000 Professional
  XP Professional, 2003 Server
  Mac OS 9.0, 9.1, X
• **Operating Systems NOT supported:**
  Windows 95
  95 OSR2
  NT 4.0 (SP2)
  NT 4.0 (SP3)
  NT 4.0 (SP6a)
  2000 Server
  2000 Adv. Server
  2000 DataCenter Server
  XP Home
• JavaScript and Cookies must be enabled in the web browser.
Note: If Desktop messaging and My CallPilot Web Messaging are installed on the same client machine, Web Messaging will be compatible with all 2.0 versions of Desktop player.
Note: My CallPilot can be used to allow for messaging via a web browser in place of the Desktop Messaging client if client and/or OS is not supported.

CallPilot Reporter considerations
Reporter is an optional component of CallPilot Manager and cannot function without it.
Reporter Installation & Configuration installs SQL Anywhere server.

If you want reports to be printed on a network printer from the web-server (as opposed to printing from the client web-browser) you'll have to change "CallPilot Reporter" service credentials, which by default is set to "Local System", to a user account with network access privileges.

If Reporter is uninstalled, global.asa has to be replaced with the original CallPilot Manager version from the CD.

External web server requirements:

Hardware

The My CallPilot and CallPilot Reporter web services can generate high CPU loads. The minimum hardware configuration for the external web server must include:

- 600 MHz PIII processor (minimum)
- 128 Mbytes of RAM (minimum)
- 1 Gbyte of free Hard Drive Space (minimum)
- Ethernet network interface card
- Monitor, keyboard & mouse

Note: The web server communicates with the CallPilot server via Ethernet.

Software

The external web server requires one of the following software configurations:

- Windows NT 4.0 server with service pack 6A and IIS 4.0.
- Windows 2000 server (SP1 or later) with IIS 5.0 (SP1 or later).
- Windows 2003 server with IIS 6.0.

Note: Windows 2000 Advanced Server and Data Center Server versions are Not supported.

If the secure socket layer (SSL) technology is to be used, you must purchase and install an additional SSL certificate for use with the IIS.

Nortel Networks recommends the following SSL certificate vendors:

- Entrust (http://www.entrust.com/certificate_services/)
- Verisign (http://www.verisign.com/)

Free disk space

The web server must have approximately 1 Gbyte of free disk space available for the installation of CallPilot web services. It is recommended that necessary disk space be estimated for a large CallPilot system or a network of CallPilot systems. AT&T's Design Engineer will assist with the estimation.

External Web server considerations

The external web server does not have to be dedicated to CallPilot web services, but it is recommended.

The same server can host web pages or provide standard network services, such as printing and file sharing.

However, running other applications and services on the server can slow down CallPilot services, and significantly reduce user productivity and satisfaction with the services.

Therefore, Nortel Networks recommends dedicating the web server to CallPilot services.

Monitoring performance

You must monitor the web server performance after an installation or a major change, such as the addition of users, to detect possible system overload. If the response time is slow during the busy hour, then use the Windows Performance Monitor to determine if the server is overloaded.

The main indicators to monitor are the CPU usage, the available memory and the physical disk space. The user response time can be degraded if one or all of the following conditions are encountered:

The CPU usage (shown as Processor Time) is constantly above 90 percent for a significant number of minutes during the busy hour.

The available memory (shown as Available Bytes) is below 4 Mbytes.

The disk space (shown as Physical Disk Space) is insufficient.

Application Builder

Application Builder is a graphical program that you use to create CallPilot applications that callers can access through dial (keypad) services. This is commonly used for auto attendant and fax applications.

Client computer

Application Builder requires the following hardware and software:

Operating System

Windows 95OSR2

98

98SE

2000 Professional (ISO-8859-1)

Latin-1 character set versions only)

NT 4.0 Workstation (SP 6a)

Windows XP Professional

25-30 Mbytes of free disk space for the Application Builder software.

Internet Explorer 5.5 SP2 or Netscape 6.2 if you plan to access Application Builder from CallPilot Manager.
CallPilot Player software. CallPilot Player will record voice items. You can download CallPilot Player from CallPilot Manager.
LAN connection to CallPilot server (Ethernet).
Software may coexist with Optivity Telephony Manager Client software.

Operating Systems Not Supported: ME, NT 4.0 Workstation (SP 1-6), NT 4.0 Server, 2000 Server, & 2000 Advanced Server, XP Home, 2003 Server "Dual-Boot" (95/NT) configurations, Novell NetWare Clients, Mac OS.

Desktop Messaging Requirements

Desktop messaging is a unified messaging application that works with an e-mail client to provide a single graphical interface for managing CallPilot voice, fax, and text messages, as well as e-mail messages.

General

The installation of Desktop/Fax Messaging client is to be performed by the customer's IT department. AT&T will assist in a support\role for the implementation and installation on the client PC's.

User workstation (Client PC) requirements
Users require the following software and hardware for desktop messaging:
Operating Systems supported:
 Windows 98
 98 SE
 Windows 2000 Professional
 Windows NT 4 SP6a
 Windows XP Professional (SP2)
Monitor with 256-color 800 x 600 capability.
15 Mbytes of free disk space to install software.
A sound card and speakers are required for playing messages on the computer.
A microphone is required for recording messages from the computer.
A LAN (Ethernet) connection to the CallPilot server so users can access CallPilot messages on your network via ISDN, ADSL, or dial-up modem.
Imaging for Windows must be installed for viewing faxes. (for fax messaging only)
Operating Systems not supported:
 Windows 95
 95 OSR2
 NT 4.0 (SP2)
 NT 4.0 (SP3)
 NT 4.0 (SP6a)
 NT 4.0 Server
 2000 Server
 2000 Advanced Server
 2000 DataCenter Server
 XP Home
 2003 Server
 Mac OS

Fax messaging

Imaging for Windows must be installed for viewing faxes. It is not required by CallPilot software.

 Imaging for Windows is installed by default on Windows 95B, Windows 98, Windows NT, and Windows 2000 operating systems. Microsoft does not provide Imaging for Windows on Windows XP.

If you are installing desktop messaging on a Windows XP computer, you will be able to view fax files in the default XP fax viewer by double-clicking the fax item. Users will also be limited to creating one fax image at a time using the fax driver.
Imaging for Windows for Windows XP can be purchased from www.eistream.com.

E-mail client requirements
Desktop messaging supports groupware e-mail clients that run with a corporate e-mail server and IMAP Internet e-mail clients. Refer to the CallPilot Distributor Technical Reference Bulletin for the most up-to-date list of supported clients. Nortel Networks recommends that you install the latest service release (SR) update for your e-mail client.

The table below indicates the recommended SR for proper functioning with desktop messaging:

Groupware Email Clients Supported:
Outlook 98 (SR 2 - Corporate Mode), 2000, 2002 (SP-1 XP), 2003
Lotus Notes 5.0x, 6.0, 6.5
Novel GroupWise 6.0x, 6.5
Groupware Email Clients NOT Supported:
Exchange 4.x, 5.x;
Lotus Notes 4.5x, 4.6x;
Novell GroupWise 5.5x.
Internet Mail Clients Supported:
Outlook Express 5.x, 6.x

Outlook 98 (Internet Mail Mode), 2002 (XP)(Internet Mail Mode), 2003(Internet Mail Mode)

Netscape 6.2x, 7.0, 7.1, 7.2
Qualcomm Eudora Pro 5.x
Citrix MetaFrame 1.8 on Windows 2000 Server
Windows 2000 Advanced Server
Windows 2000 Datacenter Server
Citrix MetaFrame XP (Standard, Enterprise, or Advanced Editions) on Windows 2000 Server
Windows 2000 Advanced Server
Windows 2000 Datacenter Server
Internet Mail Clients NOT Supported:
Outlook Express 4.x
Netscape Messenger 4.5, 4.6, 4.7x
Qualcomm Eudora Pro 4.02, 4.2

Notes:

Outlook 2002 (Office XP client)—For information about the latest Office XP service pack, go to the Microsoft web site and search for article Q307841 in the Microsoft Knowledge Base. Also refer to articles Q302491 and Q319820 for additional Outlook 2002 fixes.

To work correctly with CallPilot, you must also install the Microsoft fix to address a problem with the Outlook Protocol Manager.

For information about the Microsoft fix, go to the Microsoft web site and search for article Q311744 in the Microsoft Knowledge Base.

Outlook and GroupWise—To use desktop messaging for GroupWise or Outlook, Windows Messaging 4.0 must be installed. During GroupWise installation, the installation program checks for Windows Messaging. If it is not detected, the system asks if you want to install Windows Messaging. You should install the complete Windows Messaging system, even if Windows Messaging is already installed on the computer. This ensures that the GroupWise option is available during desktop messaging installation.

Lotus Notes—To install desktop messaging for Lotus Notes, you must have Manager or Designer control of the user's mail database. This control is set on the server by the Lotus Notes administrator.

Upgrades of CallPilot systems
- 1.05, 1.06, & 1.07 Desktop clients are not supported with CallPilot 3.0.
- Upgrade from 1.0x reporter is not supported.
- Reporter 2.0 is not backwards compatible with CallPilot 1.0x releases.

Migration from Meridian Mail

The Meridian Mail migration utility supports the migration from Meridian Mail systems to CallPilot systems. The existing data from Meridian Mail systems running Release 11 to 13 can be migrated to CallPilot.

The migration from Meridian Mail to CallPilot provides support for full voice prompt migration. You can migrate the following Meridian Mail voice services to CallPilot:
- menus
- announcements
- fax items
- voice items

Meridian Mail to CallPilot Migration Customer Requirements
- Customer must agree to return complete Meridian Mail system within 60 days of order fulfillment, or charges will apply for the ports/channels transferred.

• The Meridian Mail must be properly site licensed to the end user based on the channel of record for the Meridian Mail application. Order Management will verify the Meridian Mail history. If inconsistencies exist between the Nortel history and the installed Meridian Mail application the order could be delayed until the issues are resolved.

• The migration offer is valid for end users performing a License transfer after July, 2002.

• Tapes containing the Meridian Mail information must be 2.5 Gbytes tapes that were recorded on the Tandberg SLR4 (TD04120) or later tape drive.
The CallPilot SLR32 and SLR50 tape drives cannot read tapes that are less than 2.5 Gbytes that were created on Meridian Mail using the Archive Viper tape drive.

Mitel
No Mitel
0 Mailboxes
0 Total Ports
0 Total Storage Hours
No NP Forms
No NuPoint Fax
No NuPoint Agent
Auto Attendant Not Included
No Voice Menus Included
Voice Mail NPNet Networking Not Included
No Sites For Voice Mail NPNet Networking Included

Call Accounting
No Call Accounting
Customer may need to load database data.

Attendant Consoles
No PC Consoles
0 PC Attendant Consoles
Customer loads directory data (if applicable)

Wireless Telephony
No Wireless

0 Pocket/Handsets
0 Base Stations/Cells

Additional Configuration and Options Information:

Installation and Testing

AT&T will coordinate/provide installation, testing, and documentation of the proposed system.

Equipment room requirements and drawing will be provided.

Network Connectivity
AT&T will provide all network services.
AT&T Will Reuse Current Demarcation provided it is co-located with the installation of the new equipment. Additional charges may apply if the Demarcation must be extended
AT&T will provide cross cut of proposed system to MDF.
(MDF documentation provided by customer.)

Additional Network Information:

Customer will be required to interface with their network vendor(s) in the case where the network is not AT&T provided.

If delays are encountered due to the network vendor(s), charges at a Time and Material rates may apply.

Perform system burn-in, testing, and verify system functionality per manufacturer specifications.

Designate, place, and test all equipment per the equipment list.

Will clean-up debris in work area to customer-provided disposal site.

Cabling Information
   No new wiring is included

The customer has elected to provide AT&T with good cable records and assume responsibility for all station cabling and associated records. AT&T's responsibilities shall be limited to cross connecting station wiring to the MDF in the main equipment room where the Nortel equipment cabinets are installed. The customer shall be responsible for all station wiring and connectivity beyond the MDF, including all intermediate cross-connections. Pair 1 (blue/white), of CAT 3 or equivalent, of each horizontal station cable for each telecom outlet shall be terminated on the center pins of a 6-position outlet. The customer shall provide AT&T with clearly marked floor plans for all locations to be equipped with station devices which shall include a unique telecom outlet (TO) number and a common symbol for each voice jack.

The customer shall provide accurate cable records in an agreed upon electronic format that shall identify the corresponding MDF cable and pair number and station device for each TO. Where necessary and mutually agreed upon, AT&T will provide assistance for the tone and tag, or problem resolution, of the customer's station wiring on a time and material basis.

The customer has elected to provide AT&T with good cable records and assume responsibility for all station cabling and associated records, however AT&T will TONE, TAG and TEST 10% of the total number of station cable to verify the cable records. AT&T's responsibilities shall be limited to cross connecting station wiring to the MDF in the main equipment room where the Nortel equipment cabinets are installed. The customer shall be responsible for all station wiring and connectivity beyond the MDF, including all intermediate cross-connections. For all Digital and Analog legacy telephones instruments, Pair 1 (blue/white), of CAT 3 or equivalent, of each horizontal station cable for each telecom outlet shall be terminated on the center pins of a 6-position outlet.

The customer shall provide AT&T with clearly marked floor plans for all locations to be equipped with station devices which shall include a unique telecom outlet (TO) number and a common symbol for each voice jack. The customer shall provide accurate cable records in an agreed upon electronic format that shall identify the corresponding MDF cable and pair number and station device for each TO.

Where necessary and mutually agreed upon, AT&T will provide assistance for additional tone and tag, or problem resolution, of the customer's station wiring on a time and material basis.

AT&T Providing Turnkey Cable Records From separate and additional AT&T Cable Bid. Should AT&T not be awarded the cabling bid. The customer has the responsibility for all station cabling and associated records. AT&T's responsibilities shall be limited to cross connecting station wiring to the MDF in the main equipment room where the Nortel equipment cabinets are installed. The customer shall be responsible for all station wiring and connectivity beyond the MDF, including all intermediate cross-connections. Pair 1 (blue/white), of CAT 3 or equivalent, of each horizontal station cable for each telecom outlet shall be terminated on the center pins of a 6-position outlet. The customer shall provide SBC with clearly marked floor plans for all locations to be equipped with station devices which shall include a unique telecom outlet (TO) number and a common symbol for each voice jack. The customer shall provide accurate cable records in an agreed upon electronic format that shall identify the corresponding MDF cable and pair number and station device for each TO.

The customer shall provide AT&T with clearly marked floor plans for all locations to be equipped with station devices which shall include a unique telecom outlet (TO) number and a common symbol for each voice jack. The customer shall provide accurate cable records in an agreed upon electronic format that shall identify the corresponding MDF cable and pair number and station device for each TO.

Where necessary and mutually agreed upon, AT&T will provide assistance for the tone and tag, or problem resolution, of the customer's station wiring on a time and material basis.

AT&T Tone and Tag of existing lines has been included in the proposal. Any necessary repair or rewiring of existing cabling or jacks will be done at the customer's approval on a time and material basis.

Additional Installation and Testing Notes:

Training
AT&T will provide training for the proposed system.

Standard training hours are 8:00 a.m. to 5:00 P.M. local time.

Standard training is provided at single site provided by customer.

Standard training includes customized user guides developed by AT&T Customer Education and customer.

AT&T's Customer Training will schedule the agreed upon training classes with the customer during the installation period. Normally, training is conducted a week or two before cutover depending on the amount of users to be trained. Any training beyond standard use and acquaintance of Equipment as given by AT&T may be sought directly from the manufacturer by Customer at Customer's own expense.

AT&T will set up a classroom with active phones to demonstrate use and allow for practice in a lifelike manner. Training is then conducted according to the agreed upon schedule

AT&T's training department offers administrative, voice mail, ACD and other application training to the voice administrator as listed below. Training for product and services not listed below are available for an additional fee under a separate Scope of Work.

Symposium Web Client Supervisor Training

Sessions will include participants at a terminal or up to 10 participants in a classroom setting with a projector and PC with Web Client software loaded. Upon completion of this hands on training session, the student will be able to use Symposium Web Client to manage their call center resources and monitor call center performance.

The course outline will include an introduction and description of the system. Contact center management, which includes skilled and scheduled assignments. Real-time displays, public, private, graphical and Agent desktop displays. Creating and scheduling historical reports.

Customer Responsibilities
Provide a room with adequate table space, power, and network infrastructure as specified to allow AT&T to train on the equipment.

Agree to a training schedule with AT&T Customer Training and coordinate attendees

Call Pilot System Administrator Training

Station Training (180 users)

No 'Train the Trainer' Training
Train the Trainer is a four hour session which includes hands on telephone set and feature interactions training, followed by Q & A. An additional two hours are added when voice mail training is required as well.
Customers will receive a hard and soft copy of suggested user handouts. A reference floppy disk of the most commonly used system features and interactions is provided.

Successful participants will become responsible for all end user training and on-going support.

Options
  No ACD Agent Training
  No ACD Supervisor Training
  No ACD-C/Symposium Express System Administrator Training
  No Symposium System Administrator Training has been included
  1 Voice Mail Admins to be Trained
  120 Voice Mail Users to be Trained

Other Peripheral Equipment
  OTM Station Administrator Training
  No Desk/Fax
  No Desk/Fax

Attendant Console Consoles
  No Attendant Console Training
  No PC Attendant Console Training

  AT&T will provide a trainer for 8 hour(s) post cutover coverage

Additional Training Notes:

Additional Notes:

******Below are suggestions for what should be included.   You MUST edit or delete them accordingly.******
Include all additional detail that could impact the implementation such as:
Sub-contractors – e.g. Teltronics, MDR
LAN requirements
PC requirements
Expedite requirements – timeframe, ship date – include costs
Minimum wiring expectations
Customer/personnel requirements
Special cutover schedules
Removal of existing equipment
Loading deck requirements/issues
Networking to other locations – both AT&T and non-AT&T maintained locations
Discounts/special pricing programs
Special JCO requirements
Special Face Plates
Voice Scripting (AT&T does not provide a professional voice)
Space/communication availability for extended on-site requirements

Customer Responsibilities

Implementation

Customer will provide a single point of responsibility for all customer related issues (e.g., timely agency/department decisions and agreement to scheduling, change orders, project correspondence, training, acceptance and placing proposed system in service).

Delays caused by lack of completed site preparation, or failure to meet any responsibilities as specified below on the part of the Customer will be billed at AT&T's time and materials rates plus expenses. Any additional costs incurred by Customer as a result of delays shall be the sole responsibility of the Customer.

Service required by Customer to be performed outside of Normal Business Hours, if other than the Services covered in this Scope of Work, shall entail additional charges in accordance with AT&T's time and materials rates. After hours cutover and Test Plan execution may already be factored into and included in the implementation pricing.

AT&T reserves the right to charge Customer for the full amount or a portion of the installation in the event that Customer cancels or reschedules any installation without 10 days prior written notice.

The Customer agrees that AT&T DataComm and its authorized representatives shall have reasonable and free access to the equipment and all sites pertaining to the project. Any unreasonable delays, including but not limited to return visits required because of denial of reasonable and free access or failure of the Customer to complete agreed upon tasks required for completion of the job, will be billed additionally to the Customer.

Change Management

It may become necessary to amend this Scope of Work for reasons including, but not limited to, the following:

   Customer's changes to the scope of work and/or specifications for the Services,

   Customer's changes to the Implementation Plan,

   Non-availability of resources which are beyond either party's control; and/or,

   Environmental or architectural impediments not previously identified

In the event either party desires to change this Scope of Work, the following procedures will apply:

   The party requesting the change will deliver a Change Request document. The Change Request will describe the nature of the change, the reason for the change, and the effect the change will have on the scope of work, which may include changes to the deliverables, and the schedule.

   A Change Request may be initiated by either party for any material changes to the Scope of Work. The designated Project Manager will review the proposed change with his/her counterpart. The parties will evaluate the Change Request and negotiate in good faith the changes to the Services and the additional charges, if required, to implement the Change Request. If both parties agree to implement the Change Request, the appropriate authorized representatives of the parties will sign the Change Request, indicating the acceptance of the changes by the parties.

   Upon execution of the Change Request, said Change Request will be incorporated into, and made a part of, this Scope of Work.

   Whenever there is a conflict between the terms and conditions set forth in a fully executed Change Request and those set forth in the original Scope of Work, or previous fully executed Change Request, the terms and conditions of the most recent fully executed Change Request shall prevail.

Customer will meet with the AT&T Project Manager to review initial scope of work. Changes could impact interval and price of the project.

Customer to participate in jointly agreed to periodic project status meetings.

Customer agrees to a jointly developed implementation schedule.

Customer agrees to jointly develop a common understanding for conduct of AT&T representatives with customer end users.

Customer will meet the agreed to dates on the implementation plan. Missed dates will result in project delays and possible price increases.

Customer to provide accurate, marked floor plans, existing database records and cable records as applicable by the dates specified in the implementation schedule. Information that is not delivered by the dates specified will delay the cutover and incur additional charges.

Customer to manage internal agency/departmental groups/decisions to meet jointly agreed to project plan dates.

The Customer must identify any departments that are considered critical, meaning that they can not be without telephone service for any amount of time. The customer will also designate any areas/departments that should be consider high priority. A high priority area or department (i.e. security, helpdesk...) is an area that could be targeted to receive service first.

Customer will manage other vendor(s) associated with this project, if not managed by AT&T. Failure to successfully manage other vendors may impact implementation dates and/or price. The customer also agrees to provide AT&T reasonable and timely access to those additional vendor(s) if required.

Customer to complete all requirements for proposed system connectivity to non-AT&T-provided services.

1. Raceways, boring and cutting, trenching, conduits, variances and rights or way required for installation
2. Network service (LEC and IXC)
3. Network demarcation
4. MDF demarcation (includes documentation)
5. Customer private network (e.g. LAN/WAN or privately provided facilities in a campus environment)

At the time the cutover date is established, the customer and the PM will agree to a freeze date for all changes to the data base information. Any changes made beyond that date will result in additional charges.

Customer to validate data base information prior to freeze date and programming.

Customer to provide timely acceptance of test results, system operation verification and documentation.

Customer to review project financial data and billing.

Customer to be accessible during cutover for issue resolution.

Customer agrees that any Customer provided equipment is in working order and that AT&T will not warranty this equipment.

Security

AT&T recommends that the customer take a very close look at the security of their voice and data networks before implementation.

The most common security threats to networks today are theft of service (toll fraud, unauthorized use of network bandwidth), service disruption (denial of service attacks on network elements), and privacy attacks (bearer channel attacks, theft of information).

AT&T recommends that the customer have a person in charge of network security along with a network security plan.

For the implementation of this project, it is highly recommended that the customer change all default passwords and change passwords often. AT&T recommends establishing security levels and access privileges for the PBX (communications server), applications, and voice/data network based on administration needs.

AT&T can provide a bid for consultations and recommendations on configuration of firewalls and security plans for IP telephony implementations.

AT&T can provide a quote for a number of different security products and services to address specific security needs.

Customer Network Readiness Acknowledgement

Customers who purchase IP Telephony products need to ensure that the LAN and WAN configurations used by Customer are adequate to support IP Telephony communications throughout the Customer network infrastructure. It is the Customer's sole responsibility to make sure that the LAN and WAN infrastructure will meet and support IP Telephony specifications that provide acceptable Voice over IP (VoIP) quality. Network reconfiguration and/or upgrades of the data network (including LAN/WAN hardware/software) are the responsibility of the Customer.

To successfully implement IP Telephony, the Customer's data network must be able to support the demands of voice traffic concurrent with the data demands. Thus, a high performance network must be in place prior to IP Telephony equipment implementation in Customer's network. Without a successful high performance network infrastructure, an IP Telephony product may have undesirable performance. Additional information can be found in the Customer Network Performance Requirements section of the Consulting Services and Network Readiness document.

Customer Network Requirements
Separate VLAN for Voice over IP traffic.
Dedicated Category 5 Cabling and Layer 2 switch port per IP device (station)
Ethernet network 100Mb minimum, no Token Ring

Adequate bandwidth to support your voice, data, and video traffic volume demands over the network. Each Voice over IP Call consumes approximately 80 Kbps of bandwidth using a G.711 CODEC. Additional CODEC options are available that lower the per call bandwidth requirements on a network.

Low Delay (Latency) to ensure a good quality voice conversation ($\leq$ 125 milliseconds recommended).

Minimal Packet Loss (long term average $\leq 1\%$ and sort term not to exceed 5% in any 10-second interval are recommended) to ensure parts of a conversation are not distorted or lost especially during bursty data traffic flows.

Low Jitter (recommend maximum not to exceed 4%) to ensure that the next IP packet can be played at the destination CODEC without requiring large jitter buffers.

Switched Layer 2 infrastructure (no Hubs)

Recommend Quality of Service (QoS) throughout the voice IP path by placing only voice in the highest priority queue to ensure voice receives the bandwidth and latency required for effective voice communications.

Please sign where indicated below to acknowledge receipt of this important information:

_____

Customer Signature

_____

Printed Name

_____

Date

Consulting Services Acknowledgement

AT&T Consulting Services for IP Telephony

AT&T considers Consulting Services critical to a successful deployment of any IP Telephony solution. Consulting Services provides a comprehensive evaluation of the Customer's existing voice and data network infrastructure and provides an evaluation of that network's configuration, performance and readiness for IP Telephony technologies.

A scope of a Consulting Service engagement can be found in The Consulting Service IP Telephony Readiness Assessment section of the attached Consulting Services and Network Readiness document. Your AT&T Account Team can provide a proposal, costs, and deliverables of a Consulting Service engagement to assess your network's readiness to support Voice over IP.

Please indicate whether you wish to purchase this evaluation from AT&T:

_____ Yes

I understand the importance of assessing the capabilities of my network to support IP Telephony before implementation and wish to purchase Consulting Services from AT&T to assess my network. Your Account Team will provide a separate Statement of Work that defines the Consulting Services engagement.

_____ No

I do not wish to purchase Consulting Services from AT&T to assess my network at this time. I understand that AT&T can, therefore, not affirm that the solution will work effectively in my network environment, and I assume full responsibility for my network's performance. Additional consulting, and/or design engineering support may be provided at a later time at additional cost.

AT&T DataComm's Consulting Services or a Customer provided assessment is designed to analyze the existing network infrastructure and provides an evaluation of the configuration, performance and readiness of transmitting voice over Internet Protocol transport networks. Any network reconfiguration and/or upgrades of the data network (including LAN/WAN hardware/software) required to meet the performance requirements documented in the Customer Network Requirement section of this document are outside the scope of a AT&T DataComm Consulting Service engagement and are the responsibility of the Customer.

Please sign where indicated below to acknowledge receipt of this important information:

_____

Customer Signature

_____

Printed Name

_____

Date

911 Emergency Service Acknowledgement

Please read this notice concerning compatibility of IP Phone Sets with your 911 service.

Two general areas of concern exist regarding the implementation and operation of 911 Emergency Service in an IP Telephony environment. The first is powering of the phone set and the second is routing and information exchange for processing a 911 call.

Many digital, ISDN and IP phone sets, including Nortel Networks IP Phone sets, are inoperable during a commercial power outage if not supported by an Uninterrupted Power Supply (UPS) connected to either each local transformer power block or to each LAN switch supplying "inline power" over LAN wiring. Ethernet switches, routers, Nortel Networks Call Server and IP telephone gateways may also need to be protected by a UPS. THE FAILURE TO USE UPS PROTECTION MAY AFFECT USERS' ABILITY TO REACH 911. You are advised to use the in-line power option for all Nortel Networks MCS 5100 components, IP Phone sets, and PCs and to provide UPS service for all components along the voice traffic and call processing path in the network.

The placement of IP telephone gateways, a well-designed dialing plan, and backup Call Server support are critical for accurate emergency 911 call processing. Where only basic 911 service is available (enhanced 911 (E-911) service is not available in all areas in the United States.), you may be required to have a local IP telephone gateway at each site as well as a dialing plan that uses the local gateway for 911 calls. OTHERWISE, THE 911 OPERATOR MAY NOT BE ACCESSIBLE OR THE CALL MAY BE ROUTED TO AN INCORRECT 911 OPERATOR.

If E-911 service is available in your area, it offers the capability to provide to the 911 Operator the geographic location of the remote user. You must equip your VoIP gateway with an ISDN Primary Rate Interface (PRI) voice port, or a Foreign Exchange Office (FXO) port with an external Centralized Automatic Message Accounting (CAMA) translator box to utilize the E-911functionality. You also must maintain a location database that maps the calling party telephone number to the physical location of the calling party (i.e. building/floor/room). The E-911 system will use this database to direct emergency services to the appropriate location. The use of Nortel Networks VoIP applications may require additional configurations to correctly implement E-911. OTHERWISE, THE 911 OPERATOR MAY NOT BE ACCESSIBLE OR INCORRECT LOCATION INFORMATION MAY BE PROVIDED TO THE 911 OPERATOR.

You are solely responsible for determining whether you will equip your VoIP system with the foregoing functionality. If you do, the network and database services required to provide this capability will be provided at an additional charge. You will be solely responsible for maintaining the location database and potentially other configuration parameters, which must be updated every time the physical location of an IP phone changes. You may be required by state law (for instance, in Illinois and Texas) to purchase equipment or maintain databases to provide user-specific location information. Neither AT&T nor Nortel Networks can advise you as to what your legal obligations are in this respect. You should consult your attorney.

Our sales manager will be happy to answer questions you may have concerning the way your system works with 911 service and provide further information regarding that matter upon your request.

Please sign where indicated below to acknowledge receipt of this important information:

_____
Customer Signature

_____
Printed Name

_____
Date

System Equipment Environment

This telecommunications system is processor based and considered sensitive electronic equipment. The environment provided for the system equipment can have a significant effect on both the effective operation and durability of the equipment.

The equipment room readiness requirements and date will be discussed at the first implementation dates meeting. Failure to meet the equipment room readiness date will result in a delayed cutover and possible additional charges.

We recommend our customers provide an environment offering system equipment conditions as follows:

1.   Dedicated electrical facilities that offer system components a single point of ground (SPG) reference.

2.   A stable atmosphere (around the clock, 365 days a year) offering the system a temperature of approximately 74 degrees Fahrenheit at relative humidity levels from 35% to 65% non-condensing.

3.   A clean and well-ventilated room having a vinyl or mastic tile floor and offering adequate lighting and security.

Listed below are the specific Power and Environmental requirements for the proposed project:

Meridian·1 Option 81C & 81C (and IPE Remote) Power & Environmental Specifications

Input Voltage
AC: 180 to 280 V, 50 to 60 Hz
DC: -42 to -56.5 V

Operating Environment
Ambient Temperature -
Recommended: 15-30 degrees C, 59-86 degrees F
Absolute: 10-45 degrees C, 50-113 degrees F

Relative Humidity & Without Condensation -
Recommended: 20%-55%
Absolute: 20%-80%

Temperature change rate to be less than 10 degrees Celsius (50 degrees Fahrenheit) per hour

Power Consumption and Heat Dissipation
cPCI Core/Network Module: 360 Watts, 1230 BTU/hr
Core/Network Module: 260 Watts, 890 BTU/hr

```
Network Module:  240 Watts, 820 BTU/hr
Intelligent PE (IPE) Module:  460 Watts, 1570 BTU/hr
Peripheral Equipment Module:  240 Watts, 820 BTU/hr
Meridian Mail Module:  240 Watts, 820 BTU/hr
Application Module (Single):  210 Watts, 720 BTU/hr
Application Module (Dual):  420 Watts, 1440 BTU/hr
Pedestal:  50 Watts, 175 BTU/hr
InterGroup Module:  0 Watts, 0 BTU/hr
```

Miscellaneous Room Requirements
Location selected to install equipment should not be subject to vibration.
Equipment should be located at least 12 feet away from sources of electrostatic, electromagnetic, or radio frequency
interference (e.g. copy machines, electrical transformers).

Dimensions and Weight
Modules:
```
Weight Empty:  50 lb. (22.7 kg)
Weight Full:  130 lb. (59 kg)
Width:  32 in. (81.2 cm)
Depth:  22 in. (55.9 cm)
Height:  17 in. (43.2 cm)
```

Pedestal :
```
Weight Empty:  40 lb. (18.2 kg)
Weight Full:  70 lb. (31.8 kg)
Width:  32 in. (81.2 cm)
Depth:  26 in. (66 cm)
Height:  10 in. (25.4 cm)
```

Top Cap:
```
Weight Empty:  15 lb. (6.8 kg)
Weight Full:  15 lb. (6.8 kg)
Width:  32 in. (81.2 cm)
Depth:  22 in. (55.8 cm)
Height:  4 in. (10.0 cm)
```

Up to 4 modules are allowed per column and based on Nortel Networks Engineering Rules.

Site Condition Requirements – Option 61C & 81C PBX – AC Power
The following conditions are recommended for a column based PBX system:

Electrical

All system components, including the system ancillary equipment (modems, etc.) must be served from the same electrical distribution panel. This panel should be served directly from a load isolation transformer, or directly from the electrical service entrance facilities (main switchgear).

The system electrical service panel must be furnished with an equipment grounding bus bar, and it is recommended that this ground bus be properly served, and insulated from the metal case of the panel.

The two (2) #6 AWG conductors (logic, and safety) that are required for each of the PBX columns in the system must be referenced to the system service panel ground bus, as must the ground wires of the electrical circuits serving PBX system equipment.

Each PBX system column will require a 208V, 30A circuit terminating in an L6-30R twist-lock receptacle, and single pole facilities will be needed to accommodate system ancillary equipment.

Physical
PBX system equipment should be furnished accommodations offering adequate light, ventilation, accessibility, security, cleanliness, and a non-static environment.

The room must offer the PBX system a cool (but not dry) environment 24 hours a day, seven days a week.

Site Condition Requirements – Option 61C & 81C PBX – DC Power
The following conditions are recommended for a column based PBX system:

Electrical

All system components, including the system ancillary equipment (modems, etc.) must be served from the same (AC) electrical distribution panel.
This panel should be served directly from a load isolation transformer, or directly from the electrical service entrance facilities (main switchgear).

The system electrical service panel must be furnished with an equipment grounding bus bar, and it is recommended that this ground bus be properly served, and insulated from the metal case of the panel.

The ground (+) bus of the PBX system DC distribution panel must be served from the system panel ground bus by means of a continuously routed #6 AWG conductor.
The PBX DC power system will require AC electrical power. The DC power system, as well as the system ancillary equipment, must be powered from the system AC electrical service panel.

Each PBX system bay (row of up to 6 PBX columns) will require a #6 AWG conductor be routed from the system panel ground bus to the frame ground lug of one column in the row (the remaining columns can be daisy-chained from that column).

Conduit capable of supplying each PBX column with five #8 AWG conductors will be required to be routed from the DC power system distribution facility.

Physical

PBX system equipment should be furnished accommodations offering adequate light, ventilation, accessibility, security, cleanliness, and a non-static environment.

The room must offer the PBX system a cool (but not dry) environment 24 hours a day, seven days a week.

AT&T DataComm Power Quality Team

To assist our customer in engineering/implementing site conditions to comply with the system equipment warranty conditions, AT&T DataComm Power Quality engineers offer a letter presenting will assist in specification of environmental (including electrical) conditions specific to your PBX system. This letter assistance may be requested through your AT&T DataComm representative.

Meridian 1 Option 11C/11C Mini (and Remote Cabinet) Power & Environmental Specifications

Input Voltage
AC: 100 to 240 V, 50 to 60 Hz
DC: -42 to -54 V

Operating Environment
Ambient Temperature –
Recommended: 15-30 degrees C, 59-86 degrees F
Absolute: 0-45 degrees C, 32-113 degrees F

Relative Humidity % Without Condensation –
Recommended: 20%-55%
Absolute: 10%-95%

Power Consumption and Heat Dissipation
Mini Main/Expansion Chassis –
Power (watts): 370
Heat (BTU/hr): 1,262

Main/Expansion Cabinet –
Power (watts): 450
Heat (BTU/hr): 1,535

Miscellaneous Room Requirements

Location selected to install equipment should not be subject to vibration.

Equipment should be located at least 12 feet away from sources of electrostatic, electromagnetic, or radio frequency interference (e.g. copy machines, electrical transformers).

Dimensions and Weight
Main Cabinet/Expansion Cabinet
Weight Empty: 26 lb. (12 kg)
Weight Full: 70 lb. (31.7 kg)
Width: 22 in. (55.9 cm)
Depth: 12 in. (30.5 cm)
Height: 25 in. (63.5 cm)

Up to 5 wall-mountable cabinets or 1 cabinet, 8 chassis are allowable per system. (1 cabinet = 2 chassis)

Site Condition Requirements - Option 11 PBX
The following conditions are recommended for the Option 11 PBX system:

Electrical
All system components, including the system ancillary equipment (modems, etc.) must be served from the same electrical distribution panel.
This panel should be served directly from a load isolation transformer, or directly from the electrical service entrance facilities (main switchgear).

The system electrical service panel must be furnished with an equipment grounding bus bar, and it is recommended that this ground bus be properly served, and insulated from the metal case of the panel.

The PBX system cabinet(s) will require a #6 AWG conductor from the panel ground bus to a PBX cabinet, or to the system ground bus furnished with the PBX system.

We ask that each cabinet be furnished a 120 V, 20 A. 3 wire circuit that terminates in a (NEMA) 5-20R duplex receptacle. Please note that additional facilities will be required to accommodate the system ancillary equipment.

Please note the electrical facilities presented above represent conditions applicable to 95% of cabinet based PBX systems.
Systems that require extensive reserve power will represent exceptions to these conditions, and in such cases, we recommend consulting with AT&T DataComm Power Quality Engineers to ensure accurate specifications.

Physical
PBX system equipment should be furnished accommodations offering adequate light, ventilation, accessibility,
security, cleanliness, and a non-static environment. The room must offer the PBX system a cool (but not dry)
environment 24 hours a day, seven days a week.

AT&T DataComm Power Quality Team

To assist our customers in engineering/implementing site conditions to comply with the system equipment warranty conditions, AT&T DataComm Power Quality engineers offer a letter presenting will assist in specification of environmental (including electrical) conditions specific to your PBX system. This letter assistance may be requested through your AT&T DataComm representative.

Nortel Networks CS1000 Power & Environmental Specifications
Input Voltage
AC: 100 to 240 V, 50 to 60 Hz
DC: -42 to -54 V

CS 1000E Call Server with Drive Carrier
Ambient Temperature, long and short term -
50 to 70 degrees C, -58 to +158 degrees F
Relative Humidity, Without Condensation -
0% to 95%

Disk Drives (drive carrier as a spare)
Ambient Temperature, long term –
20 to 60 degrees C, -4 to +140 degrees F
Relative Humidity % Without Condensation, long term –
10% to 90%
Ambient Temperature, short term –
40 to 60 degrees C, -4 to +140 degrees F
Relative Humidity % Without Condensation, short term –
5% to 95%
Temperature changes must be less than 30 degrees C (54 degrees F) per hour for long- and short-term storage
and during transportation.

Disks
Ambient Temperature, long term –
10 to 53 degrees C, 50 to 158 degrees F
Relative Humidity % Without Condensation, long term –
20% to 80%
Ambient Temperature, short term –
40 to 60 degrees C, -40 to +140 degrees F
Relative Humidity % Without Condensation, short term –
10% to 90%

Media Gateways
Ambient Temperature, long and short term –
50 to 70 degrees C, -5 to +158 degrees F
Relative Humidity % Without Condensation –
5% to 95%
Temperature changes must be less than 30 degrees C (54 degrees F) per hour for long- and short-term storage
and during transportation.

Power Consumption and Heat Dissipation
Mini Main/Expansion Chassis –
Power (watts):   370
Heat (BTU/hr):   1262

Main/Expansion Cabinet
Power (watts):   450
Heat (BTU/hr):   1535

Current, Power and Cooling for CS 1000E Components
Note: Maximum voltage limit in North America: 90 and 132 V, single phase, 60 Hz

NTDU62 Core Call Server –
Current @ 120/240 V AC (A): maximum 2.50/1.25, typical 1.00/0.50
Required UPS Power (W): maximum 300.00, typical 120.00
Thermal dissipation (BTU): maximum 1023.90, typical 409.56

NTDU27 Signaling Server –
Current @ 120/240 V AC (A): maximum 2.00/0.90, typical 0.50/0.25
Required UPS Power (W): maximum 200.00, typical 50.00
Thermal dissipation (BTU): maximum 662.50, typical 204.78

NTDU14 Media Gateway –
Current @ 120/240 V AC (A): maximum 1.40/0.70, typical 1.17/0.58
Required UPS Power (W): maximum 300.00, typical 190.00
Thermal dissipation (BTU): maximum 1023.60, typical 648.30
Note: Maximum values for the Media Gateway assume worst case conditions.
It is difficult to specify a typical configuration. The typical values are intended as a rough guide for
quick estimations.

NTDU14 Media Gateway Expander –
Current @ 120/240 V AC (A): maximum 1.15/0.58, typical 1.17/0.58
Required UPS Power (W): maximum 300.00, typical 145.00
Thermal dissipation (BTU): maximum 1023.60, typical 494.70
Note: Maximum values for the Media Gateway Expander assume worst case conditions.

It is difficult to specify a typical configuration. The typical values are intended as a rough guide for quick estimation.

MRV Terminal Server
Current @ 120/240 V AC (A): maximum 1.60/0.60, typical 0.40/0.20
Required UPS Power (W):   maximum 192.00, typical 48.00
Thermal dissipation (BTU): maximum 665.3, typical 163.83

BayStack 470 -
Current @ 120/240 V AC (A): maximum 1.50/0.75, typical 0.60/0.30
Required UPS Power (W):   maximum 90.00, typical 72.00
Thermal dissipation (BTU): maximum 324.00, typical 245.74

BayStack 460 (Power over LAN not used) -
Current @ 120/240 V AC (A): maximum 4.70/2.40, typical 0.60/0.30
Required UPS Power (W):   maximum 295.00, typical 72.00
Thermal dissipation (BTU): maximum 335.00, typical 245.74

BayStack 460 (Power over LAN for 24 IP phones) -
Current @ 120/240 V AC (A): maximum 4.70/2.40, typical 1.20/0.60
Required UPS Power (W):   maximum 364.12, typical 141.12
Thermal dissipation (BTU): maximum 335.00, typical 245.74

Note: The maximum AC input for the BayStack 460 includes maximum power of the Power over LAN.

The typical rating has been adjusted to reflect configuring for IP phones (60 mA at 48 V DC)

Power and Cooling Requirements for Media Gateway Packs

NTDK20 Small System Controller Card -
Power Consumption (W): 16
UPS Power (W): 24.0
Thermal Dissipation: 24.0W/81.9 BTU

NTDK63 100BaseT Daughterboard (Dual-Port) -
Power Consumption (W): 6
UPS Power (W): 9.0
Thermal Dissipation: 9.0W/30.7 BTU

NTDK99 100BaseT Daughterboard (Single-Port) -
Power Consumption (W): 4
UPS Power (W): 6.0
Thermal Dissipation: 6.0W/20.5 BTU

NT5K02 Flexible Analog Line Card -
Active off-hook: 50%
Power Consumption (W): 26
UPS Power (W): 6.0
Thermal Dissipation: 6.6W/22.5 BTU

NT8D02 Digital Line Card -
Active off-hook: 100%
Power Consumption (W): 26
UPS Power (W): 13.0
Thermal Dissipation: 13.0W/44.4 BTU

NT8D03 Analog Line Card -
Active off-hook: 50%
Power Consumption (W): 26
UPS Power (W): 6.0
Thermal Dissipation: 6.6W/22.5 BTU

NT8D09 Analog Message Waiting Line Card -
Active off-hook: 50%
Power Consumption (W): 26
UPS Power (W): 6.0
Thermal Dissipation: 6.6W/22.5 BTU

NT8D14 Universal Trunk Card (In MG 1000T only) -
Active off-hook, DID Enabled
Power Consumption (W): 28
UPS Power (W): 42.0
Thermal Dissipation: 42.0W/143.3 BTU

NT8D15 E&M Trunk Card (In MG 1000T only) --
Power Consumption (W): 29
UPS Power (W): 43.5
Thermal Dissipation: 43.5W/148.4 BTU

NTAK09 1.5MByte DTI/PRI Card (In MG 1000T only) -
Power Consumption (W): 10
UPS Power (W): 15.0
Thermal Dissipation: 15.0W/51.2 BTU

NTRB21 TMDI Card (In MG 1000T only) -
Power Consumption (W): 12
UPS Power (W): 18.0
Thermal Dissipation: 18.0W/61.4 BTU

NTVQ01 Media Card (32 Port) --
Power Consumption (W): 18
UPS Power (W): 27.0
Thermal Dissipation: 27.0W/92.1 BTU

Rack Unit (U) Height Dimensions of CS 1000E Components:

NTDU62 Core Call Server: 3U
Signaling Server: 1U
NTDU14 Media Gateway: <5U
NTDU15 Media Gateway Expander: <5U
MRV Terminal Server: 1U
BayStack 460:   <1U
BayStack 470:   1U
Note: 1U = 4.4 cm (1.75 inches)

*Please be aware the above conditions are representative of the system equipment manufacturers conditions of
equipment warranty.*

Note: It is also recommended that any sprinkler heads in the immediate vicinity of the equipment be
equipped with high temperature sensors and caged to prevent accidental water damage.

**If you require more detail specifications related to your system or have questions with regard to the above
stated conditions, they may be obtained from engineers on the staff of AT&T. Please contact your Project
Manager or Salesperson.**

Material Handling
Customer to provide secure space for unpacking, staging and storing equipment and materials.

Customer to assume responsibility for equipment at delivery.

Customer to provide removal of old system and terminals.

Facilities
Customer to provide reasonable parking facilities during project.

Customer to provide reasonable access and security passes (requirements, e.g., background checks, drug
testing, safety courses) to working areas.

Specific training and background checks required of AT&T personnel will be at the expense of the customer.
This charge will include the expense of the training or background check and the time and material expenses
of the AT&T personnel.

AT&T DataComm:

By: _____

Name: _____

Title: _____

Date: _____

As used herein, "AT&T DataComm" refers to, as applicable, SBC DataComm, Inc dba AT&T DataComm, and SBC DataComm, a registered d/b/a of the SBC local exchange carriers in Texas, Oklahoma, Kansas, Missouri, and California.

Customer Initial

In a restricted work areas where the AT&T employee must have a customer escort, the customer agrees to provide that escort without delay. These areas will be identified during the implementation scheduling meeting when the project dates are discussed. AT&T will work with the customer to schedule at time agreeable everyone for those area's to be accessed. However, additional charges may apply if delays are encountered with access to these restricted areas.

The Customer will provide reasonable access to the receiving facilities of their building. If a loading dock is not available in the building this must be noted at the implementation meeting. AT&T will work with the customer to insure safe delivery of the equipment.

Customer to provide furniture for equipment (as required), manuals, training and help desk.

Customer to be responsible for compliance with local building codes, electrical codes, taxes, telecommunication and transmission costs associated with the proposed system.

Customer to provide training space.

Customer to provide help desk space.

Customer to provide disposal site for cleanup debris.

Customer to provide a cabinet or shelves for reference materials.

Completion Criteria
Customer Responsibilities

Customer shall ensure that the proper personnel are scheduled to review each completed Service or Deliverable upon notification of completion by AT&T.

Customer shall indicate its acceptance of the Service or Deliverable by signing the Completion Certificate within five (5) business days from presentation of the completed Service or Deliverable.

Services and Deliverables will be deemed accepted if Customer fails to respond within this five- (5) business day period.

If a Service or Deliverable is not complete for any reason, Customer shall provide written notification to AT&T and document that fact on the Completion Certificate.

AT&T shall have ten (10) days after the receipt of such notice to correct the error given it is within AT&T's scope to do so. Such time period to correct the error may be extended by mutual consent.

Additional Customer Responsibilities:

RESTRICTED — PROPRIETARY INFORMATION
This document contains Proprietary Information which is provided solely in connection with the specific opportunity identified herein. AT&T provides this proprietary information to the organization named, solely for its use in connection with this opportunity and it may not be disclosed to anyone outside the disclosed to party without the prior written consent of AT&T.

SO AGREED by the Parties' respective authorized signatories:

Customer Name:

By: _____

Name: _____

Title: _____

Date: _____

Customer to provide furniture for equipment (as required), manuals, training and help desk.

Customer to be responsible for compliance with local building codes, electrical codes, taxes, telecommunication and transmission costs associated with the proposed system.

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Additional Customer Responsibilities:

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SO AGREED by the parties' respective authorized signatories:

Customer Name:

By: _____

Name: _____

Title: _____

Date: _____

AT&T DataComm

By: _____

Name: _____

Title: _____

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Security

AT&T recommends that the customer take a very close look at the security of their voice and data networks before implementation.

The most common security threats to networks today are theft of service (toll fraud, unauthorized use of network bandwidth), service disruption (denial of service attacks on network elements), and privacy attacks (bearer channel attacks, theft of information).

AT&T recommends that the customer have a person in charge of network security along with a network security plan.

For the implementation of this project, it is highly recommended that the customer change all default passwords and change passwords often. AT&T recommends establishing security levels and access privileges for the PBX (communications server), applications, and voice/data network based on administration needs.

AT&T can provide a bid for consultations and recommendations on configuration of firewalls and security plans for IP Telephony implementations.

AT&T can provide a quote for a number of different security products and services to address specific security needs.

Customer Network Readiness Acknowledgement

Customers who purchase IP Telephony products need to ensure that the LAN and WAN configurations used by Customer are adequate to support IP Telephony communications throughout the Customer network infrastructure. It is the Customer's sole responsibility to make sure that the LAN and WAN infrastructure will meet and support IP Telephony specifications that provide acceptable Voice over IP (VoIP) quality. Network reconfiguration and/or upgrades of the data network (including LAN/WAN hardware/software) are the responsibility of the Customer.

To successfully implement IP Telephony, the Customer's data network must be able to support the demands of voice traffic concurrent with the data demands. Thus, a high performance network must be in place prior to IP Telephony equipment implementation in Customer's network. Without a successful high performance network infrastructure, an IP Telephony product may have undesirable performance. Additional information can be found in the Customer Network Performance Requirements section of the Consulting Services and Network Readiness document.

Customer Network Requirements
Separate VLAN for Voice over IP traffic.
Dedicated Category 5 Cabling and Layer 2 switch port per IP device (station)
Ethernet network 100MBs minimum, no Token Ring

Adequate bandwidth to support your voice, data, and video traffic volume demands over the network. Each Voice over IP Call consumes approximately 80 Kbps of bandwidth using a G.711 CODEC. Additional CODEC options are available that lower the per call bandwidth requirements on a network.

Low Delay (Latency) to ensure a good quality voice conversation ($\leq$ 125 milliseconds recommended).

Minimal Packet Loss (long term average $\leq$1% and sort term not to exceed 5% in any 10-second interval are recommended) to ensure parts of a conversation are not distorted or lost especially during bursty data traffic flows.

Low Jitter (recommend maximum not to exceed 4%) to ensure that the next IP packet can be played at the destination CODEC without requiring large jitter buffers.

Switched Layer 2 infrastructure (no Hubs)

Recommend Quality of Service (QoS) throughout the voice IP path by placing only voice in the highest priority queue to ensure voice receives the bandwidth and latency required for effective voice communications.

Please sign where indicated below to acknowledge receipt of this important information:

X _____ Customer Signature

X _Chris Werich_ Printed Name

X 1/26/07

Date

Consulting Services Acknowledgement

AT&T Consulting Services for IP Telephony

AT&T considers Consulting Services critical to a successful deployment of any IP Telephony solution. Consulting Services provides a comprehensive evaluation of the Customer's existing voice and data network infrastructure and provides an evaluation of that network's configuration, performance and readiness for IP Telephony technologies.

A scope of a Consulting Service engagement can be found in The Consulting Service IP Telephony Readiness Assessment section of the attached Consulting Services and Network Readiness document. Your AT&T Account Team can provide a proposal, costs, and deliverables of a Consulting Service engagement to assess your network's readiness to support Voice over IP.

Please indicate whether you wish to purchase this evaluation from AT&T:

_____ Yes

I understand the importance of assessing the capabilities of my network to support IP Telephony before implementation and wish to purchase Consulting Services from AT&T to assess my network. Your Account Team will provide a separate Statement of Work that defines the Consulting Services engagement.

_____ No

I do not wish to purchase Consulting Services from AT&T to assess my network at this time. I understand that AT&T can, therefore, not affirm that the solution will work effectively in my network environment, and I assume full responsibility for my network's performance. Additional consulting, and/or design engineering support may be provided at a later time at additional cost.

AT&T DataComm Consulting Services or a Customer provided assessment is designed to analyze the existing network infrastructure and provides an evaluation of the configuration, performance and readiness of transmitting Voice over Internet Protocol transport networks. Any network reconfiguration and/or upgrades of the data network (including LAN/WAN hardware/software) required to meet the performance requirements documented in the Customer Network Requirement section of this document are outside the scope of a AT&T DataComm Consulting Service engagement and are the responsibility of the Customer.

Please sign where indicated below to acknowledge receipt of this important information:

X _____ Customer Signature

X _Chris Werich_ Printed Name

X 1/26/07 _____

Date

911 Emergency Service Acknowledgement

Please read this notice concerning compatibility of IP Phone Sets with your 911 service.

Two general areas of concern exist regarding the implementation and operation of 911 Emergency Service in an IP Telephony environment. The first is powering of the phone set and the second is routing and information exchange for processing a 911 call.

Many digital, ISDN and IP phone sets, including Nortel Networks IP Phone sets, are inoperable during a commercial power outage if not supported by an Uninterrupted Power Supply (UPS) connected to either each local transformer/power block or to each LAN switch supplying "inline power" over LAN wiring. Ethernet switches, routers, Nortel Networks Call Server and IP telephone gateways may also need to be protected by a UPS. THE FAILURE TO USE UPS PROTECTION MAY AFFECT USERS' ABILITY TO REACH 911. You are advised to use the in-line power option for all Nortel Networks MCS 5100 components, IP Phone sets, and PCs and to provide UPS service for all components along the voice traffic and call processing path in the network.
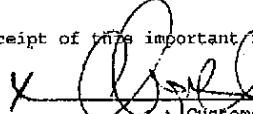
The placement of IP telephone gateways, a well-designed dialing plan, and backup Call Server support are critical for accurate Emergency 911 call processing. Where only basic 911 service is available (enhanced 911 (E-911) service is not available in all areas in the United States.), you may be required to have a local IP telephone gateway at each site as well as a dialing plan that uses the local gateway for 911 calls. OTHERWISE, THE 911 OPERATOR MAY NOT BE ACCESSIBLE OR THE CALL MAY BE ROUTED TO AN INCORRECT 911 OPERATOR.

If E-911 service is available in your area, it offers the capability to provide to the 911 Operator the geographic location of the remote user. You must equip your VoIP gateway with an ISDN Primary Rate Interface (PRI) voice port, or a Foreign Exchange Office (FXO) port with an external Centralized Automatic Message Accounting (CAMA) translator box to utilize the E-911 functionality. You also must maintain a location database that maps the calling party telephone number to the physical location of the calling party (i.e. building/floor/room). The E-911 system will use this database to direct emergency services to the appropriate location. The use of Nortel Networks VoIP applications may require additional configuration to correctly implement E-911. OTHERWISE, THE 911 OPERATOR MAY NOT BE ACCESSIBLE OR INCORRECT LOCATION INFORMATION MAY BE PROVIDED TO THE 911 OPERATOR.

You are solely responsible for determining whether you will equip your VoIP system with the foregoing functionality. If you do, the network and database services required to provide this capability will be provided at an additional charge. You will be solely responsible for maintaining the location database and potential other configuration parameters, which must be updated every time the physical location of an IP phone changes. You may be required by state law (for instance, in Illinois and Texas) to purchase equipment or maintain databases to provide user-specific location information. Neither AT&T nor Nortel Networks can advise you as to what your legal obligations are in this respect. You should consult your attorney.

Our sales manager will be happy to answer questions you may have concerning the way your system works with 911 service and provide further information regarding that matter upon your request.

Please sign where indicated below to acknowledge receipt of this important information:

X _____
                   Customer Signature

X _____
                   Printed Name

X _____
                   Date

System Equipment Environment

This telecommunications system is processor based and considered sensitive electronic equipment. The environment provided for the system equipment can have a significant effect on both the effective operation and durability of the equipment.

The equipment room readiness requirements and date will be discussed at the first implementation dates meeting. Failure to meet the equipment room readiness date will result in a delayed cutover and possible additional charges.

SBC TRAINING COST MATRIX

at&t

System Type	Meridian				City/State	Sacramento, CA 95826	
Customer Name	WTL Financial				City/State	Sacramento, CA 95826	
PBX SE	Dwight Stewart		TN	480-502-0730	FAX	480-502-0757	
Sales Ch.	Woodrow Lucas		TN	916-972-6490	FAX	0	
Date	2/6/2007			TRAINING COST			
# OF USERS	SET TYPE			CLASSES	HOURS		COST
0	ANALOG sets						
0	3901 sets						
170	2006/3902 sets			9	9		$621.00
0	2008/3903 sets						
10	2616/3904 sets			1	1		$69.00
0	2001/2002/2004 sets						
0							
0							
0	WIRELESS						
0	TRAIN THE TRAINER						
	MIRAN						
0	ACD AGENTS						
0	ACD SUPERVISOR STATION						
0	ATTND CONSOLE						
120	VOICE MAIL USERS			6	4.5		$310.50
1	VOICE MAIL ADMIN			1	5		$345.00
1	TOOLS/OPT V.-STA ADMIN			1	8		$552.00
1	PBX SYS ADMIN			1	6		$414.00
0	MMR REPORTER						
0	SYMP EXPRESS/ACD-C RPTS						
0	SYMPOSIUM SUPERVISOR						
8	HOURS OF CUTOVER COVERAGE				8		$552.00
0	TRAVEL TIME COST						
	Requested additional training hours						
				TRAINING COST SUBTOTAL	41.5		$2,863.50
				ADDITIONAL TRAINING EXPENSES			
8.5	PREPARATION TIME COST				8.5		$586.50
0	MILES PER ROUND TRIP						
	NIGHTS LODGING						
	MEALS						
$0.00	OTHER						$0.00
				TRAINING EXPENSE SUBTOTAL			$586.50
				GRAND TOTAL			$3,450.00
APPROVED BY:					DATE:	.	
	All quotes must be approved by a Training Manager and included in the PMI package						
NOTES:							
							REV 4/26/2006

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SBC TRAINING COST MATRIX

at&t

System Type	Meridian						
Customer Name	MTL Financial			City/State	Sacramento CA 95826		
PBX SE	Dennis Stoke	TN	480-502-0730	FAX	480-502-0757		
Sales Ch.	Woodrow James	TN	916-972-0400	FAX	0		
Date	2/5/2007						

# OF USERS	SET TYPE	TRAINING COST CLASSES	HOURS	COST
0	ANALOG sets			
0	3901 sets			
170	2006/3902 sets	9	9	$621.00
0	2008/3903 sets			
10	2616/3904 sets	1	1	$69.00
0	2001/2002/2004 sets			
0				
0				
0	WIRELESS			
0	TRAIN THE TRAINER			
	MIRAN			
0	ACD AGENTS			
0	ACD SUPERVISOR STATION			
0	ATTND CONSOLE			
120	VOICE MAIL USERS	6	4.5	$310.50
1	VOICE MAIL ADMIN	1	5	$345.00
1	TOOLS/OPTIVISTA ADMIN	1	8	$552.00
1	PBX SYS ADMIN	1	6	$414.00
0	MMR REPORTER			
0	SYMP EXPRESS/ACD-C RPTS			
0	SYMPOSIUM SUPERVISOR			
8	HOURS OF CUTOVER COVERAGE		8	$552.00
0	TRAVEL TIME COST			
	Requested additional training hours			
		TRAINING COST SUBTOTAL	41.5	$2,863.50

	ADDITIONAL TRAINING EXPENSES		
8.5	PREPARATION TIME COST	8.5	$586.50
0	MILES PER ROUND TRIP		
	NIGHTS LODGING		
	MEALS		
$0.00	OTHER		$0.00
	TRAINING EXPENSE SUBTOTAL		$586.50
	GRAND TOTAL		$3,450.00

APPROVED BY: _____   DATE: 2/5/07

All quotes must be approved by a Training Manager and included in the PMI package

NOTES:

REV 4/26/2006

WTL Financial
1000M Cabinet
ENGINEERING NOTES

POWER VALUES	EQUIPPED	WIRED
SYSTEM POWER CONSUMPTION (WATTS)		
TOTAL HEAT DISSIPATION (BTU's/Hr)		
SYSTEM POWER CONSUMPTION (KVA)		

	MINIMUM	EQUIPPED	WIRED	QUOTED
SW GRADUATION LEVEL				
TN'S				
AGENT LEVEL				
AGENT'S				
TOTAL IPE PORTS				288
VOICE MAIL PORTS		8		
VOICE MAIL STORAGE HOURS		350		

Jan 29 2007 Final BOM Trinity Credit 0118073.xls

CPE INSTALLATION SCHEDULE APPROVAL
Scope of Work Must Accompany this Form

Date Submitted   2/5/2007

Originator   Dwight Stewart

Customer Name: WTL Financial

Customer Service Address:
9300 Tech Center Drive
Sacramento, CA 95826

Return Approved Schedule to:
(if other than the originator)

Return to Fax #:
480-502-0757

Sales Ch: Woodrow Lucas
SC 2:   0

PBX SE: Dwight Stewart

Customer Requested
Install Date (if any):   2/1/2007

Facilities and/or C.O. Equipment
Checked: (if applicable)

Type of Equipment/Software
Required: Meridian

By Whom:

(Completed by Project Management)

The following is a schedule of dates applicable to the agreement: **DATE**

The agreement must be received by Project Mgmt. on or before: 2/19/07

Equipment will be delivered to customer site by: 2/26/07

System cutover will occur on: 3/9/07

System/Billing acceptance is targeted by: 3/16/07

Note: All scheduled dates are subject to equipment availability

_____   2/5/07   2/9/07
Project Management Approval   Date   Acceptance Valid Till

MAIN SITE

Banner Information Report : New System

Quote Reference Number: AUS031161

Reference ID:

Created By: ATT ENTERPRISE

Quote Status: Ready To Order

Budgetary Quote: No

Quote Creation Date: 11/30/2006

Quote Modification Date: 12/01/2006 11:32 AM

Activity: New System

Product: Communication Server

System Option: 1000M Cabinet

End Customer: Not Specified

Site ID: Not Specified

SBA Number: Not Specified

Banner Information

This configuration is based upon Nortel engineering rules in effect as of the run date for validated quotes but prior to distributor's submission of an order. Although engineering rules may change in the future, Nortel will honor the quoted functionality of the PBX core software only for sixty days from the run date for validated quotes, provided that the information received from the Distributor is accurate. Use of the software history retrieval process within EC is required for the quote to be honored. For hardware and application software, the actual upgrade price depends on specific applications and final engineering, which may require manual additions and deletions. Pricing is governed solely by the Nortel CPE Distributorship Agreement between each distributor and Nortel, and the Meridian 1 Product Catalog in effect on the date Nortel accepts the Distributor's order. EC and the information it provides are to be used only within and subject to the terms of the Nortel CPE Distributorship Agreement and should be treated as confidential information.

The price quoted by EC applies only to the items of equipment and software listed in the equipment breakout. These items are based solely on the inputs entered. The actual system price depends on particular applications and finalized system engineering.

For a Communication Server 1000E with Media Gateway 1000E provisioned, the Total Solution Price is for reference only. The quote reference number and price for each site must be identified separately on

Unauthorized use is prohibited.

Special Note for Third Party Systems:

Configurations requiring external equipment whose traffic and other activity levels cannot be obtained and calculated by EC (e.g., voice-mail, IVR systems, call centers, etc.) will not be guaranteed. While it may be possible to approximate the CPU Real-Time impact of a third-party system by configuring it with an equivalent Nortel product, this can only be used to derive guidelines. The results cannot be guaranteed due to the unpredictable impact on the Meridian 1 system.

IMPORTANT NOTE:

CallPilot 4.0 T1/SMDI High Capacity is not currently Generally Available. Customers may use EC for budgetary quoting until it is available. Contact Rod Jensen of Nortel at 972-684-2495 for more information.

Contact Center 6.0

EC does not automatically provision switch connectivity items for Contact Center 6.0.

Data switch - you may supply a Nortel or 3rd party Layer 2 data switch, or alternatively order the existing Basic LAN Hub as merchandise from the Nortel Product Catalog (part code NTRH9017, plus power cord).
LAN cables - if required the following may be ordered as merchandise from the Nortel Product Catalog:

A0648377 - 10 foot Category 5 Cable

A0648379 - 25 foot Category 5 Cable

In addition for the CS1000S, CS1000M Cabinet and Meridian Option 11 Chassis or Cabinet switches the following are required :
. Transceiver Mau to connect the M1 to the ELAN - Nortel part code NTRH9069 or from a 3rd party vendor
. Backplane to Transceiver cable - Nortel part code NTDK27AA or from a 3rd party vendor

CCM 6.0 and Call Pilot

If you have an existing CallPilot, the minimum supported release of CallPilot with CCM 6.0 is Release 3.0, however for optimal functionality it is highly recommended that you upgrade to CallPilot Release 4.0!

SWCP and CCT 5.0

If you are configuring SWCP 4.0 for use with CCT 5.0, please note that SWCP 4.0 will not be supported on CCT 5.0 until that product is generally available.

IMPORTANT NOTE:

CCT 6.0 for Self Service / IVR is currently not Generally Available. Please contact your Nortel representative for more information on availability. The CCT IVR features are included in EC for quotation purposes only. Any order containing CCT IVR codes will be stopped.

IMPORTANT NOTE:

CCT 6.0 does not support a mix of CCT 6.0, CCT 5.0 and TAPI systems connected to a single switch. Please ensure all CCT 5.0 and TAPI systems connected to this switch are upgraded as well.

Contact Center features availability:

Universal Networking is available in EC for quotation purposes only. Please do not order as it is not generally available. Contact your PLI/PLM representative for feature order availability dates.

SIP Contact Center

Contact Center 6.0 can be deployed in a SIP configuration with a MCS5100 and CS1000. This section is used to order the Contact Center and also provisions the CS1000 and Media Application Server pre-requisites for the Contact Center. The MCS5100 product needs to be ordered separately via the MCS5100 path on NNEC.

Contact Center Release 6.0 Upgrades: Important Note:

You have selected an upgrade to Contact Center Release 6.0. Please note that all SCCS, SWCP, and/or TAPI 5.0/CCT systems connected to a switch must be upgraded to Release 6.0 as CC 6.0 does not interact with previous releases. For further information on availability, please refer to the Product Information Centre Web site for CC6.0 Pre GA published information or contact your Nortel Product Line Introduction representative.

Contact Center Release 6.0 – Application Only – WARNING

solution only.

added via a separate order.

dependencies have not been ordered and installed. Nortel recommends

Network Health Check

The platform you have chosen supports VoIP. If you are configuring your network to carry voice traffic, Nortel highly recommends that you perform a Network Health Check (NHC) on your data network. The NHC looks for common, symptomatic network anomalies that are "IP Telephony-killing impairments" and would prevent a successful IP Telephony deployment. The purpose is to identify those anomalies and recommends actions to resolve the identified impairments. It is a snapshot in time that will help ensure success; however, it is not a guarantee of a successful deployment, nor is it a certificate of fitness.

You have several options on who can perform the NHC - customer, partner or Nortel. However, if one was NOT performed, and you call Nortel for troubleshooting assistance, and we find problems that would have been solved by a Network Health Check we reserve the right to charge for our services.

This service provides the customer with a cost-effective review of its existing IP network ability to support VoIP in association with the pending implementation of a Nortel converged solution.

For more information on the Network Health Check please click HERE.

AST ISMs

One AST ISM is required per device to be monitored or controlled by CCT. EC does not provision these automatically. Please go to the Software screen.

CCT Services

The Communication Control Toolkit (CCT) is a converged product and can be ordered via the Nortel Voice and/or Self Service Supply chains (EC, Netformx or Nortel Sales Interface). When ordering CCT please check that you have not already ordered this product via a different mechanism to ensure you do not have multiple orders of the same product. Future product upgrades and expansions need to be ordered through the same ordering tool, to have the system history consistently updated.

The Communication Control Toolkit (CCT) is offered under Full Service and Service Assist accreditation models. Accreditation requirements are posted in the Nortel Partner Information Center (PIC). You must check with your channels product manager to determine which model your channel is accredited to use. If your channel is using Service Assist, installation and yearly support services must be contracted to Nortel. Installation Services are coordinated by Nortel Contact Center Services (CCS). Nortel Professional Services provide supplementary services for custom CCT application design, development and deployment including screen pops and soft phones.

One must submit the CCT product quote (MSRP pricing) to CCS so that they can quote product maintenance. Please note that support for applications not developed by Nortel is the responsibility of the developer (customer/channel partner/3rd party). Nortel Developer Support provides optional services for consulting and application development / integration support. To engage Nortel Professional Services to assist with Design, Development and Deployment of custom CCT applications including screen pops, soft phones and other integrations, please call:

1-800-4Nortel, Express Routing Code (ERC) 1146.

Quotes for Nortel Contact Center Services (CCS) can be obtained by contacting the Bid and Proposal Team at quotes@nortel.com.

CCMM

You have added Outbound, Email or Web Communication media types to a Networked Voice Agent. The Networking Functionality of Outbound, Email or Web Communication agents is not supported in this release although the appropriate codes have being provisioned. This extra functionality will be available in a future up-issue of Contact Center.

CCMM Alert

You have chosen to reduce the number of SWCP agents. If you submit this quotation as an order, any future orders will be based on the new agent quantity.

CCMM Alert

You have chosen to reduce the number of CCMM agents. If you submit this quotation as an order, any future orders will be based on the new agent quantity.

CCMM Alert

Important Note: Web Communication agents are not available at this time. When available, Web Communication agents will be provided at no extra charge to qualifying orders. For more information, please visit the Product Information Web Site - available through nortel.com

Contact Recording and Quality Monitoring Alert

Attention! Contact Recording and Quality Monitoring requires the ordering of a comprehensive annual technical support program. Please order the applicable SRS Plus (Customer Care Plan) in the Enterprise Configurator Service Quote Module.

Selected Marketing Promotions

The following promotions have been included in this quotation

- MPR00013 Alternate Promo Process - 13% off total WPP

Alternate Promotion Process - 13% off total

Alternate promotion applies 13% discount off WPP on the entire order. Specific to identified channels. Disclaimer: You have selected MPR00013 to be applied to your quote. MPR00013 will apply a 13% discount off WPP on the entire order. By applying MPR00013, you are confirming that this quote is eligible for the promotion, as defined in the Terms and Conditions of the Promotion Distribution Notice, and that the promotion discount is equivalent to a 13% discount off WPP on the entire order.

NT8D02HA	Card 16-port XDLC	12	P
NT8D09CA	Ext. Analogue MW Line Card	1	P
NT8D14CB	Card 8 Port UXT	1	P
NTAK20AD	Stratum 3 Clock Contr D/Board	2	P
NTAK75AC	Battery Backup 2 Hour	3	P
NTDK49EB	11C Cabinet 100 BaseF Exp Kit	2	P
NTDU35AB	CS 1000M Cab Pkg (AC)	1	P
NTDU41FC	Media Card 32 Port - IPL 4.5	1	P
NTE900HC	CS 1000M CABINET SYS SW	1	P
NTE903AA	Adv CC Analog Set License	2	P
NTE903BA	Adv CC Inet Set License	1	P
NTE903DA	Adv CC Digital Set License	23	P
NTE95006	SW Pkg 57-BARS-BASIC Alternate	1	P
NTSF6800	Tndi Pkg (1.5MB Dti/Pri)	10	P
NTSK01AC	1000M/11C S/W D/B R4.5-NA/CALA	2	P
NTTK02AA	Dual Port 100BASEF D/B	1	P
NTTK14AB	PWR Cord 9.8ft 11CM 125VA	4	P
NTWB09BA	11C Expansion Cabinet AC Pkg	2	P
NTMN32GA70	M3902 Basic Charcoal	170	P
NTMN34GA70	M3904 Professional Charcoal	10	P
A0796517	TM/OTM RateTables	1	P
NTTL04EA	TM Sets Expansions(50)	3	P
NTTL05DA	TM/OTM Billing Enhanced 50 RU	1	P
NTTL07GA	TM/OTM Bill Enh 50 RUs Exp	3	P
NTTL19DA	TM Additional Client 1 PC	1	P
NTTL51DA	TM 3.0 Svr Lic-50Set-USB Dong	1	P
NTUB16AB	CallPilot External MODEM Kit	1	P
NTUB53AB	C?(OHW) Extrnal Tape Drive Kit	1	P
NTUB56CA	IP? Monitor Kit	1	P
NTUB59AC	IP? CD-ROM Kit	1	P
NTUB93BA	IP? H/W Kit-11C 1000M Ca&1000E	1	P
NTZE07EA	C?(F) Voice Channels 2 Add	4	P
NTZE19AA	Multimedia Mailbox /Voice-20	1	P
NTZE19CA	Multimedia Mailbox /Voice-100	1	P
NTZE39AB	OP M1 CS1000M E S/W Intgratn	1	P
NTZE4001	Callpilot New Sys (NO Charge)	1	P
NTZE80CA	CP 4.0 201i Sys	1	P
MPR00013	Alternate Promo Process - 13% off total WPP	1	P

913.50	10,062.00 Y	25.0%
913.50	913.50 Y	25.0%
1,104.75	1,104.75 Y	25.0%
307.50	615.00 Y	25.0%
1,836.00	5,508.00 Y	25.0%
1,215.75	2,431.50 Y	25.0%
2,943.75	2,943.75 Y	25.0%
2,019.00	2,019.00 Y	25.0%
750.00	750.00 Y	25.0%
165.00	330.00 Y	25.0%
663.75	663.75 Y	25.0%
165.00	3,795.00 Y	25.0%
0.00	0.00 N	0.0%
1,227.75	12,277.50 Y	25.0%
429.75	859.50 Y	25.0%
2,025.75	2,025.75 Y	25.0%
11.25	45.00 Y	25.0%
608.25	1,216.50 Y	25.0%
78.75	13,387.50 Y	25.0%
236.25	2,362.50 Y	25.0%
600.00	600.00 Y	25.0%
135.75	407.25 Y	25.0%
921.00	921.00 Y	25.0%
492.75	1,478.25 Y	25.0%
215.25	215.25 Y	25.0%
232.50	232.50 Y	25.0%
129.00	129.00 Y	25.0%
897.75	897.75 Y	25.0%
333.75	333.75 Y	25.0%
343.50	343.50 Y	25.0%
116.25	116.25 Y	25.0%
300.75	1,203.00 Y	25.0%
859.50	859.50 Y	25.0%
3,651.75	3,651.75 Y	25.0%
0.00	0.00 N	0.0%
0.00	0.00 N	0.0%
3,222.00	3,222.00 Y	25.0%
0.00	0.00 N	0.0%

MAIN SITE

Order Code Breakout Report - New System

Quote Reference Number: AUS0311611

Reference ID:

Created By: ATT ENTERPRISE

Quote Status: Ready To Order

Budgetary Quote: No

Quote Creation Date: 11/30/2006

Quote Modification Date: 12/01/2006 11:32 AM

Activity: New System

Product: Communication Server

System Option: 1000M Cabinet

End Customer: Not Specified

Site ID: Not Specified

SBA Number: Not Specified

Order Parts List Breakout: Main - AUS0311611

Quantity			Part Number	Description
12			NT8D02HA	Card 16-port XDLC
1			NT8D09CA	Ext. Analogue MW Line Card
1			NT8D14CB	Card 8 Port UXT
2			NTAK20AD	Stratum 3 Clock Contr D/Board
3			NTAK75AC	Battery Backup 2 Hour
2			NTDK49EB	11C Cabinet 100 BaseF Exp Kit
	1		NTDK27AA	Cabinet Ethernet Adapter Cable
	1		NTDK20JA	Small Sys Controller Card 32MB
	1		NTTK01AA	Single Port 100BASEF D/B
	2		A0346816	Coupler Adapter ST-ST Fibre
	2		A0817052	Cable 5M/16 100BaseF MT/RJ/ST
	1		NTDK57DA	Remote Security Device Sm Sys
	1		NTDK48KA	Cab. + Chassis Main Cable Kit
1			NTDU35AB	CS 1000M Cab Pkg (AC)
	1		NTDU27ABE5	Signaling Server (RoHS)
	1		NTR97013	WRS VxWorks Universal License
	1		NTDK48KA	Cab. + Chassis Main Cable Kit
	1		NTDK20JA	Small Sys Controller Card 32MB
	1		NTDK70BB	Power Supply
	1		NTAK11BD	Cabinet AC/DC Opt 11C
	1		NTDK27AA	Cabinet Ethernet Adapter Cable
1			NTDU41FC	Media Card 32 Port - IPL 4.5
	1		NTAG81CA	Media Card Maint. Cable (3m)
	1		NTCW84JA	M1 BkPlane to 50 Pin Panel
	1		NTVQ0110E5	L-Adapter Ethernet 50pin - DB9
	1		NTVQ83AA	ITG EMC Shielding Kit
	1		NTVQ01BB	VMG Card 32 Port Assembly

Qty	Part Number	Description
1	NTDW81AG	IP Line 4.5 Documentation CD
1	N0025722	IP Line 4.5 Readme First Doc
1	NTM403AC	IP Line 4.5 Compact Flash
1	NTE900HC	CS 1000M CABINET SYS SW
1	NTDK57AA	Nortel STD Security Device
1	P0834606	Small Systems Keycode
1	NTDU80BC	S/S S/W CD ROM Kit Rls 4.5
1	NTSK01AC	1000M/11C S/W D/B R4.5-NA/CALA
1	NTLH91AC	CS 1000 Documentation CD R4.5
2	NTE903AA	8 Adv CC Analog Set License
1	NTE903BA	8 Adv CC Inet Set License
23	NTE903DA	8 Adv CC Digital Set License
1	NTE95006	SW Pkg 57-BARS-BASIC Alternate
10	NTSF6800	Tmdi Pkg (1.5MB Dti/Pri)
1	NTBK04AA	Cable 1.5MB DTI/PRI Twisted
1	NTRB21AC	T1 Multi Purpose Dig I/F TMDI
2	NTSK01AC	1000M/11C S/W D/B R4.5-NA/CALA
1	NTTK02AA	Dual Port 100BASEF D/B
4	NTTK14AB	PWR Cord 9.9ft 11CM 125VA
2	NTWB09BA	11C Expansion Cabinet AC Pkg
1	NTDK70BB	Power Supply
1	NTAK11BD	Cabinet AC/DC Opt 11C
170	NTMN32GA70	M3902 Basic Charcoal
10	NTMN34GA70	M3904 Professional Charcoal
1	A0796517	TM/OTM RateTables
1	P0912542	TM/OTM Rate Table Sheet
3	NTTL04EA	TM Sets Expansions(50)
1	NTTL05DA	TM/OTM Billing Enhanced 50 RU
3	NTTL07GA	TM/OTM Bill Enh 50 RUs Exp
1	NTTL19DA	TMAdditional Client 1 PC
1	NTTL51DA	TM 3.0 Svr Lic-50Set-USB Dong
1	P0942020	TM/OTM Keycode Label
1	NTTL39AB	USB Programmed Dongle

Qty				Part Number	Description
	1			NT8R759A	TM 3.0 Inst&Eng Guide&CD Pkg
1				NTUB16AB	CallPilot External MODEM Kit
	1			NTRH9078	MODEM 56KBPS External
	1			A0841984	Modem Cable With Filters
1				NTUB53AB	CP(OHW) Extrnal Tape Drive Kit
	1			A0677506	4mm DAT Cleaning Cartridge
	1			NTRH9038	HW Portable Tape Drive Assy
	1			A0769312	SCSI Adapter
	1			A0780247	Data Cartridge
	1			NTRH3502	External SCSI Tape Cable
1				NTUB56CA	IPE Monitor Kit
	1			NTRH9013	HW Perip 101 Enhanced K/Board
	1			NTRH9014	3 Button Mouse
	1			A0855616	Cable Assy 201i PS2 Extension
	1			P0941397	PS2 Extension Instructions
	1			N0038380	15 Inch LCD Flat Panel Display
1				NTUB59AC	IPE CD-ROM Kit
	1			NTRH3502	External SCSI Tape Cable
	1			NTRH9105	Portable CD-ROM
1				NTUB93BA	IPE H/W Kit-11C 1000M Ca&1000E
4				NTZE07EA	CP(F) Voice Channels 2 Add
1				NTZE19AA	Multimedia Mailbox /Voice-20
1				NTZE19CA	Multimedia Mailbox /Voice-100
1				NTZE39AB	CP_M1 CS1000M E S/W Intgratn
1				NTZE4001	Callpilot New Sys (NO Charge)
1				NTZE80CA	CP4.0 201i Sys
	1			NTDK57AA	Nortel STD Security Device
	1			NTZE16BB	CP Speech Activ Msg Vocabulary
	1			NTZE16AB	CP Msg Voice Prompts Languages
	1			NTZE08CB	CP 201i Storage - 350 HRS
	1			N0032917	CP4.0 Keycode
	1			NTUB50GA	CP4.0 201i CD Image Set
	1			NTUB01CA	201i Srvr Chas Sub-Ass Pkg
	1			NTUB63BA	CP4.0 Cmn SW Cmpts + Doc BOM
1				MPR00013	Alternate Promo Process - 13% off total WPP

**Customer Supplied Items Breakout: Main -
AUS0311611**

| Qty ID | | | | Part Number | Description |

No Customer Supplied Items have been removed